# Table Of Content

**About MonsoonSIM** ........................................................................................................ 5
**Design principles behind MonsoonSIM** ...................................................................... 7
**The MonsoonSIM Transformation** .............................................................................. 9
**MonsoonSIM Finance Module**
  - Background [Finance Module] .................................................................................. 10
  - Operating model [Finance Module] ........................................................................... 12
**MonsoonSIM Finance Micro Concepts**
  - Concept Title : Operating Expense [ID: 3551] ......................................................... 14
  - Concept Title : Profit & Loss [ID: 3522] .................................................................. 16
  - Concept Title : Price Elasticity [ID: 3511] ............................................................... 17
  - Concept Title : Balance Sheet [ID: 3521] ................................................................. 18
  - Concept Title : Trading Profit (Gross Profit) [ID: 3554] .......................................... 19
  - Concept Title : Trial Balance [ID: 6243] .................................................................. 20
  - Concept Title : Inventory [ID: 3546] ........................................................................ 21
  - Concept Title : Cost Of Goods Sold (COGS) [ID: 3547] .......................................... 22
  - Concept Title : Cash Flow [ID: 3544] ..................................................................... 23
  - Concept Title : Current Ratio [ID: 7415] .................................................................. 24
  - Concept Title : Delinquency Payment Out [ID: 7418] ............................................ 25
  - Concept Title : Credit Rating [ID: 11306] ................................................................. 26
  - Concept Title : Fully Amortising loan vs Interest Only loan [ID: 11307] ............... 28
  - Concept Title : Cash Overdraft [ID: 3545] ............................................................... 29
  - Concept Title : Account Payable [ID: 3553] ............................................................. 30
  - Concept Title : Foreign Exchange (Forex) [ID: 3518] ............................................. 31
  - Concept Title : Account Receivables [ID: 3548] ..................................................... 32
  - Concept Title : Asset Investment [ID: 3557] ............................................................. 33
  - Concept Title : Return on Asset [ID: 3533] ............................................................... 34
  - Concept Title : Asset Residual Value [ID: 3563] ...................................................... 35
**MonsoonSIM Finance KPIs** .......................................................................................... 37

**MonsoonSIM Procurement Module**
  - Background [Procurement Module] ........................................................................... 38
  - Operating model [Procurement Module] ................................................................... 39
**MonsoonSIM Procurement Micro Concepts**
  - Concept Title : Purchase Request (PR) & Purchase Order (PO) [ID: 3524] .......... 40
  - Concept Title : Vendor (Supplier) Bulk Discount [ID: 3550] .................................... 41
  - Concept Title : Vendor (Supplier) Lead Time [ID: 3526] .......................................... 42
  - Concept Title : Vendor Dynamic Pricing [ID: 3517] .............................................. 43
  - Concept Title : Future Delivery [ID: 3516] ............................................................... 44
  - Concept Title : Blanket Purchase Order [ID: 3515] ............................................... 45
  - Concept Title : Credit Limit (Vendor) [ID: 3561] ...................................................... 46
**MonsoonSIM Procurement KPIs** ................................................................................ 47

**MonsoonSIM Retail Module**
  - Background [Retail Module] .................................................................................... 48
  - Operating model [Retail Module] .............................................................................. 49
**MonsoonSIM Retail Micro Concepts**
  - Concept Title : Retail Demand (Cycle Stock) [ID: 3512] ........................................ 50
  - Concept Title : Retail Space Planning [ID: 3523] ..................................................... 51
  - Concept Title : Impact of Price change on Retail Sales [ID: 3513] .......................... 52
**MonsoonSIM Retail KPIs** ............................................................................................ 53

**MonsoonSIM Marketing Module**
  - Background [Marketing Module] .............................................................................. 54
  - Operating model [Marketing Module] ...................................................................... 55
**MonsoonSIM Marketing Micro Concepts**
  - Concept Title : Market Intelligence [ID: 3556] ......................................................... 56
  - Concept Title : Marketing Investment [ID: 3555] ..................................................... 57
  - Concept Title : Market Share [ID: 8281] ................................................................. 58
  - Concept Title : Marketing ROI Analysis [ID: 3519] ................................................. 59
**MonsoonSIM Marketing KPIs** ..................................................................................... 60
MonsoonSIM Forecast Module
Background [Forecast Module] ............................................. 61
Operating model [Forecast Module] ................................. 61
MonsoonSIM Forecast Micro Concepts ............................... 62
  Concept Title : Retail Forecast [ID: 3514] ..................... 63
  Concept Title : B2B Market Demand [ID: 3528] .......... 64
MonsoonSIM Forecast KPIs .................................................. 65

MonsoonSIM Warehouse/Logistic Module
Background [Warehouse & Logistic Module] .................. 66
Operating model [Warehouse & Logistics Module] ....... 67
MonsoonSIM Warehouse/Logistic Micro Concepts ............. 68
  Concept Title : Move Stock [ID: 3527] ....................... 68
  Concept Title : Warehouse Capacity [ID: 3525] .......... 69
  Concept Title : Reorder Point [ID: 3549] ................. 70
MonsoonSIM Warehouse/Logistic KPIs ......................... 72

MonsoonSIM B2B Module
Background [B2B Module] ................................................. 73
Operating model [B2B Module] ........................................ 74
MonsoonSIM B2B Micro Concepts ..................................... 75
  Concept Title : Sales Order [ID: 3520] ..................... 75
  Concept Title : Bidding/Tendering [ID: 3530] .......... 77
MonsoonSIM B2B KPIs ..................................................... 79

MonsoonSIM Production Module
Background [Production Module] ....................................... 80
Operating model [Production Module] ............................. 81
MonsoonSIM Production Micro Concepts ............................ 82
  Concept Title : Bill of Materials (BOM) [ID: 3532] .... 82
  Concept Title : Production Capacity [ID: 3529] .......... 83
  Concept Title : Batch Production Order [ID: 3558] .... 84
  Concept Title : Production Effectiveness [ID: 12057] 85
MonsoonSIM Production KPIs ............................................. 86

MonsoonSIM MRP Module
Background [MRP Module] ............................................... 87
Operating model [MRP Module] ....................................... 88
MonsoonSIM MRP Micro Concepts .................................... 89
  Concept Title : Material Requirement Planning (MRP) for Trading Company [ID: 3534] 89
  Concept Title : Material Requirement Planning (MRP) for Manufacturing Company [ID: 3559] 91
  Concept Title : Safety Stock [ID: 3552] ..................... 93
  Concept Title : Preferred Vendor (Sourcing) [ID: 3560] 94
MonsoonSIM MRP KPIs ...................................................... 95

MonsoonSIM Maintenance Module
Background [Maintenance Module] ................................. 96
Operating model [Maintenance Module] ....................... 97
MonsoonSIM Maintenance Micro Concepts ....................... 98
  Concept Title : Asset Maintenance [ID: 3531] .......... 98
  Concept Title : Periodic Maintenance [ID: 3510] ...... 99
  Concept Title : Predictive Maintenance [ID: 3535] 100
  Concept Title : Overall Equipment Efficiency [ID: 3536] 102
  Concept Title : Fixed Asset Disposal [ID: 3562] ...... 103
MonsoonSIM Maintenance KPIs ................................. 104

MonsoonSIM HR Module
Background [Human Capital Management Module] .......... 105
Operating model [Human Capital Management Module] .... 107
MonsoonSIM HR Micro Concepts ..................................... 109
  Concept Title : Planned, Actual, Shortfall [ID: 3541] 109
  Concept Title : Employee Counselling [ID: 3537] .... 110
  Concept Title : Employee Recruitment [ID: 3538] .... 111
  Concept Title : Employee Transfer [ID: 3564] ....... 112
  Concept Title : Employee Training [ID: 3539] ....... 113
  Concept Title : Payroll [ID: 3540] ......................... 114
  Concept Title : Headcount Index [ID: 12054] .... 115
About MonsoonSIM

MonsoonSIM is a unique, experiential learning, pedagogical platform for business studies.

Concepts covered by MonsoonSIM include:

- Business and economy fundamentals
- Business operational management
- Enterprise Resource Planning (ERP)
- Logistics and Supply Chain Management (SCM)

There are altogether close to three hundred (300) business concepts. These are important and fundamental concepts applicable to any trading, distribution, manufacturing and service business. To allow learners to discover these concepts through experiential learning, the concepts are carefully wrapped into twelve (12) business departments of a typical business.

The twelve departments are:

1. Finance & Accounting
2. Procurement
3. Retail
4. Forecast and Planning
5. Marketing
6. Warehouse and Logistics
7. B2B or Wholesales
8. Production
9. MRP
10. Maintenance
11. Human Capital Management
12. Service Management

The key uniqueness of MonsoonSIM is that it is, probably, the first true cloud-based Experiential Learning system in the world that covers such broad spectrum of business concepts.

MonsoonSIM is extremely flexible. One MonsoonSIM workshop can be anywhere between 3 (three) hours to 3 months long.

Education institutions have used MonsoonSIM in the following:

- embedded in the curriculum
  - in Accounting studies
  - in Economy studies
  - in Management studies
  - in Information and Technology studies
  - in Business simulation studies
  - in Industrial Engineering studies
  - in Logistics studies
  - in ERP studies
  - in Marketing studies
  - in Entrepreneurship studies
- in postgraduate research
- in labs
- in workshops
- in in-take recruitment
- in departmental competition
- in a campus-wide competition
- in a national competition
- in regional competition

Corporates have used MonsoonSIM in the followings:
- in the management training program
- in overall employee empowerment
- in employee assessment
- in team-building events
- in annual corporate events
- in pre-ERP implementation workshop
- in post-ERP implementation workshop
- as change management workshop

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To know more about MonsoonSIM as a product, [Click here](http://www.monsoonsim.com/guide.html?stage=MSIM_REVIEW)

**Videos on MonsoonSIM**

Read More than 17000 reviews on MonsoonSIM

What a Professor says after experiencing MonsoonSIM, [Click here](http://www.monsoonsim.com/guide.html)

How MonsoonSIM transforms Education
[http://www.monsoonsim.com/home.html](http://www.monsoonsim.com/home.html)
Design principles behind MonsoonSIM

Here are the design principles behind MonsoonSIM (xxx)

- Fun
- Intuitive
- Educational
- Focus
- Integrate-able into existing curriculum
- Evolving concepts

**Fun**

Today's generation Y want learning to be creative, interactive, and fun*. Making education Fun is one of the core design principals in MonsoonSIM. This fact is attested by more than seventeen (17) thousands feedbacks MonsoonSIM has received over the years (see http://www.monsoonsim.com/guide.html?stage=MSIM_REVIEW). Players can start learning complex business process without any preparations. To make learning fun, MonsoonSIM is designed such that learners are learning without the students realizing so. There is no need to have any pre-study worksheets or handouts.

**Intuitive**

Generation Y does not highly value reading and listening to lectures*. In MonsoonSIM, there are no "user guides", no "manuals". Learners can start learning business concepts within five (5) minutes after login into the systems. Everything the learners need are on their screens. Intuitively and interactively, learners will know what to do from the get-go. In addition, MonsoonSIM supports team learning. In learning from MonsoonSIM, almost 95% of their knowledge are self discovered or from their team-mates.

**For Educational & Training**

Educational games can become very wild. There is no best practice in the industry of what an educational game should be. MonsoonSIM put "Educational" as one of our key design principals because we would like to focus on Education. Hence, all the modules we developed, all the features we have added, are all geared towards the following aims:

- For Educators
  - Easier to Teach
  - More to Teach
- For Learners
  - Easier to Learn
  - More to Learn

**Focus**

MonsoonSIM is focused on business education. Our vision is to transform business education through experiential learning. As such, all the design put into MonsoonSIM are focused on business. Concepts covered by MonsoonSIM include:

- Business fundamentals
- Business operational management
- Enterprise Resource Planning (ERP)
- Logistics and Supply Chain Management (SCM)

**Integrate-able into existing curriculum**

Universities, colleges and high schools have transformed people’s lives through education for centuries. Along with the advancement of technology, they have transformed themselves in many ways over the past decade, including becoming more efficient and cost effective. MonsoonSIM is designed to be part of that innovation. As such, MonsoonSIM has no fixed curriculum. Instead, we allow our Certified Trainers to "design" their own curriculum based on their requirements.
Evolving concepts

MonsoonSIM is like an "onion" of knowledge. When you first play MonsoonSIM, you will notice few very core business concepts. As you learn more (by virtue of playing MonsoonSIM game), you will discover more and more knowledge. The knowledge will present itself when the players are ready to take on more knowledge. MonsoonSIM make sure the learning process continues and the complexity increases without stressing out the learners.

In summary: Generation Y prefers to work in groups with hands-on experiences. They enjoy trial and error. Generation Y does not highly value reading and listening to lectures as has been traditional in business education. They want learning to be creative, interactive, and fun; and they enjoy thinking outside the box.*

* (see Jodie Eckleberry-Hunt, PhD, ABPP and Jennifer Tucciarone, MD in https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3244307/).
The MonsoonSIM Transformation

A MonsoonSIM session must be delivered by a certified trainer (CT). Typical trainers are:

- educators, lecturers, teachers
- corporate HR trainers, business process trainers
- motivators and coaches

Transformations

With MonsoonSIM, the following transformations are taking place:

Transformations for learner:

- From learning by doing -- to -- learning by experiencing
- From learning by theory -- to -- learning by practicing
- From learning by remembering -- to -- learning by doing

Transformation for educator/trainer:

- From being a teacher -- to -- being a conductor / facilitator / motivator
- From developing course content -- to -- configuring course content
- From teaching standard materials -- to -- teaching supplementary, non-standard materials (not already covered by MonsoonSIM)

In a typical scenario, a facilitator would create a virtual environment, a virtual marketplace, and learners, grouped in teams, forming virtual companies to compete with each other. By making the teams compete with each other to achieve a certain Key Performance Indicators (KPI), the learners will learn many valuable knowledge from their experiences.

Here are some of the thought processes the learners have to go through:

- Identify and discover patterns
- Discover new concepts
- Make assumptions and deductions
- Experiment with their hypothesis
- Form strategies
- Execute strategies
- Observe results
- Suffer the virtual consequences for missteps
- Recover from mistakes
- along the way... learning by experience

Here is a short summary about our transformation:  Click here
MonsoonSIM Finance Module

Background [Finance Module]

Finance is a broad term that describes two related activities: the study of how money is managed and the actual process of acquiring needed funds.


In MonsoonSIM, Finance is one of the core modules. The focus currently is on how money is managed. Eventually, we will also cover the fund’s acquisition and funds management.

Since all transactions that involve money are recorded in the Profit & Loss, Balance Sheet, and Trial Balance module within the Finance, it is not possible to run any MonsoonSIM workshop without turning ON the Finance Module.

MonsoonSIM Finance is more in line with GAAP (General Accepted Accounting Practice). This means learners interested in business (regardless of types of business) will get exposed to GAAP financial reports easily with MonsoonSIM.

MonsoonSIM supports multiple levels of complexity. Learners are encouraged to start with the basic module, called Baseline model, and slowly progress to more advanced functionalities.

Here are what you will learn in the MonsoonSIM Finance (Baseline) :

- How transactions are being recorded in the Accounting ledgers
- How to read GAAP financial reports
  - Profit & Loss
  - Balance Sheet
  - Trial Balance
- How to trace transactions in the ledgers
- Concept of asset and liabilities
- Concept of cash flow
- Concept of profitability
- Concept of cost
- Concept of expense
- Concept of margin
- Concept of credit/debit

Here are some of what you will learn in the MonsoonSIM Finance (Advanced) :

- Concept of Accrual accounting
- Concept of Account Payables
- Concept of Account Receivables
- Concept of Foreign Exchanges
- Concept of Credit Limit
- Importance of cash management
- How to navigate business in cash-tight situation
- How to avoid bankruptcy
- When to convert asset to cash in emergency situation
- How to measure and maintain own Current Ratio
- How Credit Rating works and how to monitor our own credit rating
- How credit rating affects getting funds from lender
- How Long Term Payables are booked in accounting
- How to select loan types based on our cash situation
- How to decide between Fully Amortising loan and Interest Only loan
- How to use credit effectively to grow business

In MonsoonSIM, the Finance module is related to the following department (modules)
• Purchasing (PMN)
• Retail (RTL)
• Marketing (MKT)
• Forecasting / Planning (FCS)
• Warehouse / Logistics (WHS)
• B2B / Wholesales (B2B)
• Production (PRD)
• Maintenance (MNT)
• Human Resources Management (HCM)
• Service Management (SRV)

Note: There is no pre-requisite to learning the MonsoonSIM Baseline concepts
Operating model [Finance Module]

The following describes the operating model of MonsoonSIM Finance module

- Focus on how money is managed (not yet about funds acquisition and management)
- There are two types of Accounting
  - Cash
  - Accrual
- There are three financial reports which are more in line with GAAP (General Accepted Accounting Practice)
  - Profit & Loss
  - Balance Sheet
  - Trial Balance
- Bank overdraft facility (standby-loan) is available for immediate draw down when the operating cash runs out
- When the accumulated overdraft has reached the bank facility limit, the company may not be able to draw down any more for new purchases
- Overdraft will incur daily interest
- Overdraft will appear as short termed liability in the Balance Sheet
- To reduce interest expense, all incoming cash (from sales) will be immediately used to pay off the overdraft
- Start with initial cash for all teams
- Every transaction will be fully recorded and traceable in Accounting
- Team will not be able to run business anymore (bankrupt) when cash runs out and bank facility exhausted
- Cash Accounting
  - No concept of Account Payables and Receivables
  - Payment can only be made if there is enough cash on hand
  - No partial payment is supported
- Accrual Accounting
  - Concept of Account Payables and Account Receivables
  - No partial payment is supported
  - Payment to vendor will be based on vendor-specific Terms of Payment
  - Besides payment to vendors, all other payment (salary, etc) will not be accrued
  - Concept of Vendor Credit Limit
    - Account Payable to vendor will decrease this credit limit
- Foreign currency can affect the price of an imported product. If our local currency gets weaker against the foreign currency, the imported product, which is quoted in foreign currency, will be more expensive, and vice versa
- Delinquent Payout
  - If you have exhausted your overdraft limit, your payment will be considered delinquent.
  - You can find the list of your delinquent out-payments in your Finance Menu.
  - The number of outstanding delinquents now affects your CREDIT RATING.
  - Exceeding certain # of outstanding delinquents will also bring about bankruptcy. This limit is configurable by the CT
  - Everyday, the system will automatically try to settle your delinquent payment, starting from one with the lowest amount, and the process will repeat daily.
- Bankruptcy
  - When the number of delinquent payments exceed the limit set by the CT, the team will be proclaimed bankrupt.
  - Once bankrupt, the team will not be able to perform any transactions. No sales, No bidding. No more expenses to be incurred. The account is pretty much frozen. However, other teams can continue as usual.
- Credit Rating
  - There are 5 types of credit rating a company can get
    - Unrated --- your company is not rated yet, system will start rating on day 10
    - DDD --- if your outstanding delinquent payments exceed 20
    - CCC --- if your outstanding delinquent payments is between 10 to 20
    - BBB --- if your outstanding delinquent payments is between 1 to 10
    - AAA --- if your do no have any outstanding delinquent out-payment
  - AAA being the best, it means that your company is most credit - trust worthy
Credit Rating is important when applying for a business loan

- **Loan**
  - There are several types of loans available. These are configurable by CT
  - Terms - indicates the duration of the loan
  - Base Interest - indicates the base interest usually are set by the lending institutions
  - Central Bank rate - simulates the Central Bank's inter-bank overnight lending rate. This rate is floating and, in MonsoonSIM, the future fluctuations are accurately predicted and can be viewed in the Forecast menu
  - Effective rate - Base Interest + Central Bank's rate
  - Fully amortisation - where the loan is being paid off based on an equal amount at every period. This amount consists of ever increasing principal portion and an ever decreasing interest portion.
  - Interest only - where the loan is being paid off based on interest only at every period and a lump sum of principal at the very end of the term. (Balloon payment)
  - Loan in MonsoonSIM will be considered as Long Term Payable in accounting

- **Current Ratio Requirement**
  - Current Ratio is one of the requirements to obtain a loan
  - Current Ratio is defined as total asset divided by total liability
  - One can find the current current ratio from the Business Intelligence menu. Current Ratio appears in Finance Section

- **Credit Rating Requirement**
  - Credit Rating is one of the requirements to obtain a loan

- Players can analyze the financial performance and other useful intelligence by carefully examining the information from the Business Intelligence module
MonsoonSIM Finance Micro Concepts

1. Concept Title : Operating Expense [ID: 3551]

Level
BASIC

Background
An operating expense, operating expenditure, operational expense, operational expenditure or Opex is an ongoing cost for running a product, business, or system. Opex may also include the cost of workers and facility expenses such as rent and utilities.

Typically, operating expenses include:

1. accounting expenses
2. license fees
3. maintenance and repairs, such as snow removal, trash removal, janitorial service, pest control, lawn care, etc
4. advertising
5. office expenses
6. supplies
7. attorney fees and legal fees
8. utilities, such as telephone
9. insurance
10. property management, including a resident manager
11. property taxes
12. travel and vehicle expenses

Purpose
To demonstrate the concept of Operating Expenditure or Opex and its place in Accounting

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Run the game for at least three days
5. Taking role as one of the players and open up the player screen
   1. In Finance-Accounting menu, observe:
      a. that you have incurred Operating Expenses such as Rentals and Salary
      b. how your Net Profit is reduced by your Operating Expenses
      c. how your Cash On Hand is reduced by the amount of your Operating Expenses
      d. that Operating Expenses are booked as Debit
      e. how the Operating Expenses are related to Net Profit
   2. Further explorations:
      a. Observe the charts and graphs under Finance Menu
      b. Try changing the Retail Rental Space and observe the changes in your Operating Expenses in your financial statements
3. Further experiment can be done to observe other Operating Expenses such as Marketing, Maintenance, Staff Training, etc.
6. As the Certified Trainer, you can
   1. observe how the teams’ performance in Operating Expenses by using the Observation Module
Reset to Day 0 and repeat the process if necessary
2. Concept Title: Profit & Loss [ID: 3522]

Level

BASIC

Background

A profit and loss statement (P&L) is a financial statement that summarizes the revenues, costs and expenses incurred during a specific period of time. These records provide information about a company’s ability to generate profit by increasing revenue, reducing costs, or both.

Source

Purpose

To demonstrate the concept of Profit and Loss (P & L) as one of the key financial statements for a company

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Run the game for at least three days
5. Taking role as one of the players and open up the player screen
   1. In Finance-P&L menu, observe:
      - that profit and loss statement is a financial statement that shows the company’s revenues and expenses at a specific point in time.
      - Operating Revenue, are the total sales you have made, be it finished goods or raw materials or service sales.
      - COGS is the cost of the goods that you've sold.
      - Gross profit is the profit you've made by calculating the cost of goods vs your sales price.
      - Operating expense, are the operational expense of running a product, business, or system.
      - Net profit is the actual profit after deducting the trading profit with your operational expenses.
   2. Run the game for three more days and observe the changes in your profit and loss statement
   3. Further explorations:
      - Observe the charts and graphs under Finance Menu
      - Examine the differences and relationships between balance sheet and profit and loss statement
      - Observe how Gross Profit and Operating Expense can affect your Net Profit

Reset to Day 0 and repeat the process if necessary
3. Concept Title: Price Elasticity [ID: 3511]

Level
BASIC

Background
Price elasticity of demand is a measure of the relationship between a change in the quantity demanded of a particular good and a change in its price. It is a term in economics often used when discussing price sensitivity. If a small change in price is accompanied by a large change in quantity demanded, the product is said to be elastic (or responsive to price changes).

Purpose
To demonstrate the effect of a price change on the demand for a product or service.

Steps
1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Run the game for 3 days
5. Taking role as one of the players and open up the player screen
6. Observe:
   - unit sold (Market Demand) for product 1, 2, 3 for the three areas based on the last three days
   - which area has the highest demand, which has lowest
7. Change price as follows:
   - Decrease the price of product 1, 2, 3 by exactly 10% at one of the areas
   - Run the game for 3 more days
8. Click Chart Unit Sold. Observe the Unit sold increases for product 1, 2, 3 for that area
9. Calculate the % increase in Unit Sold compare to the days before you raise the price
   - Do you also see 10% increase in each of the product?
   - Which of the products is more sensitive towards price change? The product that is less sensitive to price changes is considered product with less price elasticity
10. Further consider the followings:
    - If we know product "A" is less sensitive to price changes, do you think we could get more margin out of product "A" by raising the price of "A"?
11. As the Certified Trainer, you can
    - observe Retail Sales, Unit Sold by using the Observation Module

Reset to Day 0 and repeat the process if necessary
4. Concept Title: Balance Sheet [ID: 3521]

Level

BASIC

Background

Balance sheet provides a snapshot of your practice’s financial status at a particular point in time. This financial statement details your assets, liabilities and equity, as of a particular date. The primary difference between the profit and loss statement and the balance sheet involves their respective treatments of time. The balance sheet summarizes the financial position of a company for one specific point in time. The P&L statement shows revenues and expenses during a set period of time.

Purpose

To demonstrate the concept of Balance Sheet, which is one of the key financial statements, and how it differs from Profit and Loss statement

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Do not run the game
5. Taking role as one of the players and open up the player screen
   1. In Finance-Balance Sheet menu, observe:
      - that balance sheet is a financial statement that summarizes a company's assets, liabilities and shareholders’ equity at a specific point in time
      - that the Total Asset vs Total Liabilities & Owner's Equity are always equal (balanced)
      - that Current Assets are current assets is a balance sheet account that represents the value of all assets that can reasonably expect to be converted into cash within one year.
      - that Cash is a liquid asset or money that you can use immediately to buy stuff and pay for other services like rental space, etc
      - those Long-term Assets are the value of a company's property, equipment, and other capital assets, minus depreciation. Long-term assets are usually recorded at the price at which they were purchased and do not always reflect the current value of the asset.
      - that Fixed asset is the asset you own such as machine
      - that Asset depreciation is a reduction in the value of an asset over time, due in particular to wear and tear
      - that Current Liabilities are a company's debts or obligations that are due within one year, appearing on the company's balance sheet and include short-term debt, accounts payable, and other debts.
      - that Owner's Equity is the amount of capital "paid in" by investors during a common or preferred stock
   2. Run the game for three days and observe the changes in the balance sheet
3. Further explorations:
   - Observe the charts and graphs under Finance Menu
   - Examine the differences between balance sheet and profit and loss statement
   - Observe how accounting records the initial Owner’s Equity
   - Observe how the Net profit is being recorded in balance sheet

Reset to Day 0 and repeat the process if necessary
5. Concept Title : Trading Profit (Gross Profit) [ID: 3554]

Level

BASIC

Background

Gross profit (or sometimes referred to as Trading Profit) is the total revenue less only those expenses directly related to the production or sales of goods for sale, called the cost of goods sold (COGS). These typically include expenses for raw materials or purchasing cost and the labor to build or assemble a product but exclude other wages and overhead expenses, such as rent.

Source

Purpose

To demonstrate the concept of Trading Profit

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Run the game for at least three days
5. Taking role as one of the players and open up the player screen
   1. In Finance-Accounting menu, observe:
      - that you have accumulate Trading Profit from the Sales of the Juices
      - how your Trading Profit is calculated
      - how your Trading Profit is different from your Total Sales
      - how Trading Profit is being booked in your Accounting
      - how Trading Profit is related to your COGS (Cost Of Goods Sold)
      - how Trading Profit is related to Net Profit
   2. Further explorations:
      - Observe the charts and graphs under Finance Menu
      - Try changing the Retail sales prices and observe the changes in your Trading Profit in your financial statements
   3. Further experiment can be done to observe what impact if you buy your product in bulk to get Vendor Discount. Then, watch how the discounts affect your Average Costs (Cost Of Goods Sold) and how it further impact your Trading Profit
6. As the Certified Trainer, you can
   - observe how the teams’ performance in Retail Margin by using the Observation Module

Reset to Day 0 and repeat the process if necessary
6. Concept Title: Trial Balance [ID: 6243]

Level

BASIC

Background

Trial Balance is a list of closing balances of ledger accounts on a certain date and is the first step towards the preparation of financial statements. It is usually prepared at the end of an accounting period to assist in the drafting of financial statements.

It is separated into debit balances and credit balances. Asset and expense accounts appear on the debit side of the trial balance. Liabilities, capital and income accounts appear on the credit side. The total of all debit balances appearing in the trial balance must equal to the sum of all credit balances.

Purpose

To demonstrate the concept of one of the key financial reports -- the Trial Balance

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Do not run the game
5. Taking role as one of the players and open up the player screen
   1. In Finance-Trial Balance menu, observe:
      • that trial balance acts as the first step in the preparation of financial statements. It ensures that the account balances are accurately extracted.
      • that the Total Debit balance vs Total Credit balance are always equal (balanced)
   2. Run the game for three days and observe the changes in the trial balance
   3. Further explorations:
      • Observe the charts and graphs under Finance Menu
      • Examine the differences between balance sheet, trial balance, and profit and loss statement
      • Observe how accounting records each account

Reset to Day 0 and repeat the process if necessary
7. Concept Title: Inventory [ID: 3546]

Level

BASIC

Background

1. An itemized catalog or list of tangible goods or property.
2. The value of materials and goods held by an organization to support production (raw materials, subassemblies, work in process), for support activities (repair, maintenance, consumables), or for sale or customer service (merchandise, finished goods, spare parts).

Inventory is often the largest item in the current assets category, and must be accurately counted and valued at the end of each accounting period to determine a company's profit or loss. Organizations whose inventory items have a large unit cost generally keep a day to day record of changes in inventory (called perpetual inventory method) to ensure accurate and on-going control.

Source

Purpose

To demonstrate how to see the Inventory details in accounting and how Inventory is booked in the financial statements

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Do not run the game
5. Taking role as one of the players and open up the player screen
6. Open up Finance - Accounting menu. Observe:
   a. the initial amount of stocks that is recorded for each store
   b. the current cost of your goods or inventory. Note that MonsoonSIM uses average method for the inventory.
   c. "Value" is the money value of the units that you have (cost x units)
   d. That Inventory is considered an Asset in your balance sheet
   e. That every inventory acquired must be properly recorded in your accounting transactions
7. In the player KPI box, observe that since your inventory has dimensions and has taken up space in your retail stores
8. Run the game for a few more days and try to purchase some from vendors. Observe:
   a. The movement of your inventory via your Unit Sold chart
9. Further consider the followings:
   a. Based on the current rate of sales, how many days to go before we run out of stock?
   b. What happen if you buy too much inventory, what will it affect your Cash On Hand?
10. As the Certified Trainer, you can
    a. Observe Retail Sales, Unit Sold by using the Observation Module

Reset to Day 0 and repeat the process if necessary
8. Concept Title: Cost Of Goods Sold (COGS) [ID: 3547]

Level

BASIC

Background

Cost of goods sold (COGS) are the direct costs attributable to the production of the goods sold by a company. This amount includes the cost of the materials used in creating the good.

The Average Costing method is the most commonly used method in general business. Lowering the cost of goods sold (COGS) will improve your Gross Margin or Trading Profit, which will increase your Net Profit.

Source

Purpose

To demonstrate a method of calculating Ending Inventory cost. In MonsoonSIM, we use Average Costing.

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Do not run the game
5. Taking role as one of the players and open up the player screen
   1. In the Finance's KPI box, observe:
      - your current cost of goods/inventory based on your initial purchases
   2. Run for three days, and buy apple juice at a discounted volume
      - Observe the cost change, if any
      - Note that the new cost is the average cost of the existing cost and the cost of the new product purchased
   3. Further experiment can be done to observe what impact your COGS has towards your Trading Profit as well as Net Profit
6. As the Certified Trainer, you can
   - observe Retail Margin by using the Observation Module
   - observe Cost Of Good Sold using the Observation Module

   • Reset to Day 0 and repeat the process if necessary
9. Concept Title : Cash Flow [ID: 3544]

Level
BASIC

Background
Cash flow is the net amount of cash and cash-equivalents moving into and out of a business. Positive cash flow indicates that a company's liquid assets are increasing, enabling it to settle debts, reinvest in its business, return money to shareholders, pay expenses and provide a buffer against future financial challenges. Negative cash flow indicates that a company's liquid assets are decreasing. Net cash flow is distinguished from net income, which includes accounts receivable and other items for which payment has not actually been received. Cash flow is used to assess the quality of a company's income, that is, how liquid it is, which can indicate whether the company is positioned to remain solvent.

Purpose
To explain more about the concept of Cash Flow

Steps
1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Do not run the game
5. Taking role as one of the players and open up the player screen
6. Observe:
   - how your cash position has changed from initial paid up capital after the initial purchases on day 0
7. Run the game for a few days, observe:
   - how your cash has been used for payment for rental space and salary with cash
   - how your cash has improved from your Retail Store sales
8. Further consider the followings:
   - what if you run out of cash and what if the bank loan is also exhausted?
   - what if you over purchase and turn all your cash into inventory?
   - if you can only sell 10000 units of juice per day in total, how many units of juices you need to purchase at one time? and how often do you need to buy to make sure you always maintain a healthy cash position?
9. As the Certified Trainer, you can
   - observe Cash On Hand by using the Observation Module

Reset to Day 0 and repeat the process if necessary
10. Concept Title : Current Ratio [ID: 7415]

Level
BASIC

Background

The current ratio is mainly used to give an idea of a company's ability to pay back its liabilities (debt and accounts payable) with its assets (cash, marketable securities, inventory, accounts receivable). As such, current ratio can be used to make a rough estimate of a company's financial health.

Current Ratio = Current Asset / Current Liability

One of the purposes of Current Ratio is for lending institutions in considering your loan applications.

The higher the current ratio indicates the healthier your financial situation is.

Purpose

To demonstrate the concept of Current Ratio

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Run the game for at least three days
5. Taking the role as one of the players and open up the player screen
6. In your Business Intelligence menu, observe:
   1. observe your current ratio again and see if it has dropped
   2. once approve, observe your Balance Sheet to see that you now have Liabilities
   3. watch and wait till your loan has been approved
   4. apply for a loan, approve the application
   5. activate loans (loan 1 or loan 2 or both)
   6. Note that for a special case where you have no liability yet, your current ratio is being defaulted to 100
   7. make sure the current ratio is equal to the current asset divided by the current liability (you can see your total liability and asset from your Balance Sheet report)
   8. your current ratio, which is one of the items under the Finance section

Reset to Day 0 and repeat the process if necessary
11. Concept Title: Delinquency Payment Out [ID: 7418]

Level

BASIC

Background

Typically, the term *delinquent* commonly refers to a situation where a borrower is late or overdue on payments, such as income taxes, a mortgage, an automobile loan or a credit card account. In our case, it is the notices we have received from our intended payees, notifying us that our payment to them has been unsuccessful (defaulted).

Purpose

To demonstrate how the delinquent out-payments can happen and it can cause bankruptcy

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Configure your Finance module, reduce your overdraft limit to a small value, say 50000 (currency unit)
4. Configure your Finance module, reduce your initial cash to a small value, say 50000 (currency unit)
5. Configure your Retail module, reduce your initial stock to 0 units in all warehouse
6. Initialize Game to Day 0
7. Taking role as one of the players and open up the player screen
8. Run the game and watch your cash run low as the cash is being used to pay off rental and salary
9. Observe:
   1. that you will slowly exhaust your cash and overdraft
   2. that you will start receiving incoming delinquent payment notice for some of the payment failures as your cash and overdraft have run out
   3. that in your KPI Box, you will see the # of delinquent payments increase
   4. that in your Finance menu, you will see a menu called Delinquents and you can click to see the list of delinquent payments pending.
5. Further explorations:
   - If you turn on the Loan, you will see your credit rating which is affected by the # of delinquent payments
   - If you somehow have cash coming in (may be through new loans), your delinquent payments will be settled before any other expenses.

Reset to Day 0 and repeat the process if necessary
12. Concept Title : Credit Rating [ID: 11306]

Level
BASIC

Background
A credit rating is an evaluation of the credit risk of a prospective debtor, determines their ability to pay back the debt within the confines of the loan agreement, without defaulting.

A high credit rating indicates a high possibility of paying back the loan in its entirety without any issues, while a poor credit rating suggests that the debtor has had trouble paying back the loan.

The credit rating affects the chances of being approved for a given loan.

Purpose
To demonstrate how the purpose of credit rating

Steps
1. Load this recommended configuration
2. Turn on the recommended modules
3. Configure your Finance module, and allow both Loan1 and Loan2
4. Initialize Game to Day 0
5. Taking the role as one of the players and open up the player screen
6. Run the game and go to Finance > Loan > New Loan
7. When choosing a loan, you can see the Credit Rating Requirement for each loan provider.
8. There are 5 types of credit rating a company can get
   - Unrated  ---  your company is not rated yet, the system will start rating on day 10
   - DDD  ---  if your outstanding delinquent payments exceed 20
   - CCC  ---  if your outstanding delinquent payments is between 10 to 20
   - BBB  ---  if your outstanding delinquent payments is between 1 to 10
   - AAA  ---  if you do not have any outstanding delinquent out-payment
9. AAA is the best, it means that your company is most credit - trustworthy
10. Credit Rating is important when applying for a business loan. You will get your credit rating after 10 days.
11. Further explorations:
    1. Configure your Finance module, reduce your overdraft limit to a small value, say 50000 (currency unit)
    2. Configure your Finance module, reduce your initial cash to a small value, say 50000 (currency unit)
    3. Configure your Retail module, reduce your initial stock to 0 units in all warehouse
    4. Initialize Game to Day 0
    5. Taking role as one of the players and open up the player screen
    6. Run the game and watch your cash run low as the cash is being used to pay off rental and salary
    7. When your credit rating has go down into BBB or less, try to borrow from Maxi Profit and see if your
       loan application is rejected or not.
    8. Analyze the reason

Reset to Day 0 and repeat the process if necessary
13. Concept Title: Loan Application [ID: 11305]

Level
BASIC

Background
A loan is an act of giving money to another party in exchange for future repayment of the principal amount along with interest or other finance charges.

The terms of a loan are agreed to by each party in the transaction before any money or property changes hands.

Purpose
To demonstrate how to apply a loan

Steps
1. Load this recommended configuration
2. Turn on the recommended modules
3. Configure your Finance module, and allow both Loan1 and Loan2
4. Initialize Game to Day 0
5. Taking the role as one of the players and open up the player screen
6. Run the game and go to Finance > Loan > New Loan
7. When choosing a loan, you can observe:
   1. Credit Rating Requirement
      Credit Rating is one of the requirements to obtain a loan
   2. Current Ratio Requirement
      Current Ratio is one of the requirements to obtain a loan
      Current Ratio is defined as total assets divided by total liability
      One can find the latest current ratio from the Business Intelligence menu. Current Ratio appears in Finance Section
   3. Loan in MonsoonSIM will be considered as Long Term Payable in accounting
   4. Interest only - where the loan is being paid off based on interest only at every period and a lump sum of principal at the very end of the term. (Balloon payment)
   5. Fully amortization - where the loan is being paid off based on an equal amount at every period. This amount consists of ever-increasing principal portion and an ever decreasing interest portion.
   6. Effective rate - Base Interest + Central Bank's rate
   7. Central Bank rate - simulates the Central Bank's inter-bank overnight lending rate. This rate is floating and, in MonsoonSIM, the future fluctuations are accurately predicted and can be viewed in the Forecast menu
   8. Base Interest - indicates the base interest usually are set by the lending institutions
   9. Terms - indicates the duration of the loan
8. In the forecasting menu, you also can see the interest forecast to help you decide the best time to take a loan.
9. Further explorations:
   1. Try to apply for a loan from both loan provider and see the difference between Full Amortize and Interest Only loan
   2. Try to analyze the best option to choose between the two loan provider

Reset to Day 0 and repeat the process if necessary
14. Concept Title : Fully Amortising loan vs Interest Only loan [ID: 11307]

Level
BASIC

Background

Fully amortizing payment refers to a periodic loan payment where, if the borrower makes payments according to the loan’s amortization schedule, the loan is fully paid off by the end of its set term.

Interest-only loans allow borrowers to defer paying back their full loan amount and only pay for the cost of borrowing money, i.e. interest. This is the way for borrowers to reduce the immediate costs of borrowing money.

Normally, borrowers must make repayments that include both principal and interest payments. Through the process of amortization, the loan’s balance decreases over time.

Purpose

To demonstrate the difference between Fully Amortising loan and Interest Only loan

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Configure your Finance module, and allow both Loan1 and Loan2
4. Configure Loan2 Term into 10 days
5. Initialize Game to Day 0
6. Taking the role as one of the players and open up the player screen
7. Run the game for 10 days, and go to Finance > Loan > New Loan
8. apply 1,000,000 for both loan provider
9. After your loans are active, click the payment plan
10. Observe:
    1. Notice that in Fully Amortize loan, you pay the interest + principal each time
    2. Notice that in Interest Only loan, you only pay the interest in the beginning, and pay the principal at the end of the term
    3. Try to calculate the total interest, and determine which is the best loan provider to choose
11. Further explorations:
    1. Try to configure a different term for each loan provider
    2. Try to analyze the best option to choose between the two loan provider
    3. Check your cash flow after taking a loan

Reset to Day 0 and repeat the process if necessary
15. Concept Title : Cash Overdraft [ID: 3545]

Level
BASIC

Background

An overdraft facility allows you to write cheques or withdraw cash from your current account up to the overdraft limit approved. It is a short-term standby credit facility which is usually renewable on a yearly basis. It is repayable on demand by the bank at any time.

The overdraft limit is the maximum amount that you can overdraw. You pay interest only on the amount that you overdraw. Interest is calculated on the daily balance overdrawn and debited to the account monthly. Any unpaid amounts of interest are added to the overdrawn amount in the following month.

Source

Purpose

To show that business can still operate provided the company is supported by a line of credit (loan) from another party (usually a bank). Typically, a loan has a maximum limit and it comes with interest charge.

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Do not run the game
5. Taking role as one of the players and open up the player screen
6. Observe:
   • how much cash remaining after the initial purchases
7. Run the game for a few days
8. Make big purchases, until the cash is below zero
9. Observe that you can still continue to make purchases even though your cash is minus (as long as it is not over minus 2.5 million )
10. Observe that you have started to incur interest charges in your Accounting for the amount of money loaned by the bank
11. Continue to make purchases until you are unable to make any more purchases when your cash is beyond the maximum overdraft of 2.5 million provided by the bank
12. Further consider the followings:
   • How do you return to healthy cash-flow after accumulating so much inventory?
   • How does buying so much inventory affect your profitability? Are your total asset value remain somewhat the same in your balance sheet?

Reset to Day 0 and repeat the process if necessary
16. Concept Title : Account Payable [ID: 3553]

Level
ADVANCE

Background

Accounts payable is money owed by a business to its suppliers shown as a liability on a company’s balance sheet.

When a company orders and receives goods or services in advance of paying for them, we say that the company is purchasing the goods on account or on credit. The supplier (or vendor) of the goods on credit is also referred to as a creditor.

If the company does not pay upon receiving the goods or service, the vendor's bill or invoice will be recorded by the company in its liability account Accounts Payable

Purpose

To demonstrate the Account Payable concept

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. In FIN run-time parameter, config to allow Accrual System
4. In PMN run-time parameter, observe that the Terms of Payment for Finished Goods vendors are set to some future days (ex: 5 days)
5. Initialize Game to Day 0
6. Run the game
7. Taking role as one of the players and open up the player screen
8. Click to procure Apple Juice and observe that the Terms Of Payment is what was configured
9. Click to procure say 20000 Apple Juice
10. As soon as the product is delivered, observe:
    - that the Cash in Accounting has not been reduced
    - that there is a new line item called Account Payable as Liability in your Balance Sheet
    - that there is now a new menu called "AP" under Finance, click to list the outstanding AP and notice the due date of the payment and the amount
11. Click on the PO List and observe that the PO is considered completed even though the vendor has not been paid
12. When the due date arrives, open the Accounting and notice:
    - that the Cash has been reduced by the same amount as indicated in the PO
    - that the Account Payables has been reversed, click to study the details

? Reset to Day 0 and repeat the process if necessary
17. Concept Title : Foreign Exchange (Forex) [ID: 3518]

Level
BASIC

Background

Foreign exchange refers to the global market where currencies are traded virtually around the clock.

Assuming when we import a product, we are being quoted in the foreign currency. So when the foreign currency increase in value, the cost to us, as importer, will also increase.

In the foreign exchange (forex) market, currency valuations move up and down as a result of many factors, including interest rates, supply and demand, economic growth and political conditions.

The impact on businesses is a little more complex because these businesses often conduct transactions in a number of different currencies and tend to obtain their raw materials from a wide variety of sources.

Source

Purpose

To demonstrate the impact of foreign currency fluctuations on the cost of imported product.

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Run the game
5. Taking role as one of the players and open up the player screen
   - Click on Outsource Finished Goods menu and write down how much your vendors are quoting the 2nd product (Orange Juice)
   - Without having to stop the game, on day 3, turn on the Forex Allowed using the run-time setting
   - After a couple of days, observe the prices that are offered by the same vendors have changed
   - Now, click on the Forecast menu to look at the Forex forecast chart
   - Observe that the prices offered by the Vendor is actually tracking the movement of the foreign currency. The more expensive the foregin currency is, the higher the vendor quote is, and vice versa
5. Further considerations:
   - Given the forecast of the future currency movement, what kind of procurement strategy we need to use to ensure we can reduce our product cost

Reset to Day 0 and repeat the process if necessary
18. Concept Title: Account Receivables [ID: 3548]

Level
ADVANCE

Background
Accounts receivable is the money that a company has a right to receive because it had provided customers with goods and/or services. For example, a manufacturer will have an account receivable when it delivers a truckload of goods to a customer on June 1 and the customer is allowed to pay in 30 days.

Most companies operate by allowing some portion of their sales to be on credit. In some cases, business usually offers this type of credit to frequent or special customers who are invoiced periodically. The practice allows customers to avoid the hassle of physically making payments as each transaction occurs.

Purpose
To demonstrate the concept of Account Receivables

Steps
1. Load this recommended configuration
2. Turn on the recommended modules
3. In FIN run-time parameter, config to allow Accrual System
4. In B2B client run-time parameter, observe that the Terms of Payment for are properly set to some future days (ex: 5 days)
5. Initialize Game to Day 0
6. Run the game
7. Taking role as one of the players and open up the player screen
8. Look for B2B offers
9. Find a "Deal" and click on it
10. Observe that you have created a Sales Order (SO)
11. Fulfill the SO by doing procuring Finished Goods from vendors
12. Once the SO has been fulfilled, observe that:
   - Your cash has not increased
   - You have a new line of item called Account Receivable in your Balance Sheet
   - You have a new record in your Finance - AR menu
13. Wait a few days until the payment date is reached
14. Open the Finance Accounting and observe that:
   - Your cash has increased
   - Your Account Receivable has been reversed
   - Your record in AR menu under Finance has been removed

Reset to Day 0 and repeat the process if necessary
19. Concept Title: Asset Investment [ID: 3557]

Level

BASIC

Background

Asset investment is an important part of a business to achieve growth and expand business presence. Synergies between the acquired assets and return on asset, to aim a long-term sustainable growth. The examples of fixed asset investment are real estate infrastructure, machinery, etc. that are held for more than one year.

Purpose

A company invests in asset to improve its top and bottom line. Asset is not considered expense and is treated differently in the Accounting book. In MonsoonSIM, a team must invest in machines for producing its own products hoping to improve profitability by lowering product costs.

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. In PRD run-time menu, allow Machine Type 2
4. Initialize Game to Day 0
5. Run the game
6. Taking role as one of the players and open up the player screen
7. Click on Production, Machine menu
8. After deciding which machine to buy, proceed to buy two machines
9. After the machines have arrived, take a look at the Accounting books
10. Observe:
   1. that you now have Fixed Asset recorded in your book
   2. that Fixed Asset is booked under Debit while cash has been reduced by the same amount
   3. that the machine has no impact on the Operating Expenses except a new item called Depreciation
11. Further investigate:
   - what factors affecting our decision on which machine to buy?
   - how much space is required to install the machine?
   - how many juice each machine will be able to make per day?

Reset to Day 0 and repeat the process if necessary
20. Concept Title: Return on Asset [ID: 3533]

Level
BASIC

Background
Return on assets (ROA) is an indicator of how profitable a company is relative to its total assets. ROA gives an idea as to how efficient management is at using its assets to generate earnings. Calculated by dividing a company's annual earnings by its total assets, ROA is displayed as a percentage. Sometimes this is referred to as "return on investment".
The formula for ROA is:
\[
\text{ROA} = \left( \frac{\text{Net income}}{\text{Total assets}} \right) \times 100\%
\]

Purpose

To demonstrate the Return Of Asset (Fixed) concept.

Return on assets (ROA) is an indicator of how profitable a company is relative to its total assets. ROA gives an idea as to how efficient management is at using its assets to generate earnings. Calculated by dividing a company's annual earnings by its total assets, ROA is displayed as a percentage.

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Run the game with 40 seconds per day (to slow it down)
5. Let the Retail business run so we can generate some profit
6. Try to do all this within day 1
   - Take the role as one of the players of team 1
   - Purchase 1 machine (and quickly approve)
   - Take the role of another player from another team
   - Purchase 2 machine (and quickly approve)
7. Back to Game Admin
8. Use Observation module to observe the Return On Asset
9. Observe that Team 1 will have higher ROA as compared to Team 2
10. This is because Team 2 use more Asset to obtain the same amount of profit as Team 1. This means that Team 1 has higher Return on Asset as compared to Team 2

Reset to Day 0 and repeat the process if necessary
21. Concept Title : Asset Residual Value [ID: 3563]

Level
BASIC

Background
The residual value of a fixed asset is an estimate of how much it will be worth at the end of its lease, or at the end of its useful life. The lessor uses residual value as one of its primary methods for determining how much the lessee pays in lease payments. As a general rule, the longer the useful life or lease period of an asset, the lower its residual value.

Residual values reflect how much you can sell the asset for after the you has finished using it or once the asset-generated cash flows can no longer be accurately forecast.

The residual value of an asset should be checked at least once a year, at the end of each year.

Purpose
The residual value of an asset is usually estimated as its fair market value, as determined by agreement or appraisal. Residual value may be different from your Depreciated Book Value and the differences can be recorded as other Income or Loss. For example: Let's say a machine costing $15,000 has an estimated service life of 10 years, and at the end of its service life it can be sold as scrap metal to the dump for $2,000

Steps
1. Load this recommended configuration
2. Turn on the recommended modules
3. Configure the followings:
   - Set the Asset depreciation day from 60 days to 10 days
4. Initialize Game to Day 0
5. Run the game
6. Taking role as one of the players and open up the player screen
7. Buy 1 machine
8. After the machines have been recorded, continue to run the game for about 5 days
9. Stop the game
10. Observe your Asset book value under Production - Machine
11. Observe your Asset depreciation charges in Accounting
12. You can sell the machine now, but you will get 90% of the Book Value.
13. Since we need to show the Residual Value, let’s run for another 6 days to make sure the machine is fully depreciated
14. Now the book value of the machine should indicate 0
15. However, in MonsoonSIM, the minimum you will get is 10% of your machine cost or 90% of the current Book Value, whichever is lower
16. In this case, since the Book Value is 0, you will be able to sell for 10% of the Machine cost, which is 30000 (cur)
17. Dispose this asset
18. Observe the recordings in the Accounting
   - Observe that your Asset and Depreciation are now reversed in your Balance Sheet
   - Note that you will get 30000 of Other Income as your residual value is now bigger than your booked value (of value 0)

In summary:
- If a fixed asset is depreciated over its useful life, then the asset’s residual value is the lowest value that it can be depreciated to. In MonsoonSIM, we let our players to depreciate the full amount but we allow
players to dispose with minimal of 10% of the purchased cost. This is in order to allow our players to experience the Other Income that is related to the disposal of Asset

Reset to Day 0 and repeat the process if necessary
MonsoonSIM Finance KPIs

1. Utilisation - All Space
2. Sales
3. Net Profit
4. Trading Profit
5. Operating Expense
7. Margin - Gross Profit - Retail - by Finished Goods
8. Vendor postponed delivery - Over Credit
9. by Retail stores - Margin - Gross Profit
10. No Fund to pay vendor
11. No Fund to pay FG vendor - by Finished Goods Vendors
12. No Fund to pay RM vendor - by Raw Material Vendors
13. Vendor postponed delivery - No Fund
14. by Retail stores - Margin - Gross Profit - by Finished Goods
15. Cash On Hand
16. Margin - Profit
17. COGS - by Finished Goods
18. Penalty - Accumulated
19. [Table] Profit and Loss - Latest
20. [Table] Operating Expenses - Latest
21. #Delinquent Payout
22. Current Ratio
23. Loan Outstanding
24. Loan Usage
MonsoonSIM Procurement Module

Background [Procurement Module]

Procurement is the act of purchasing or otherwise taking possession of something, especially for business purposes.

Read more:  http://www.investopedia.com/terms/p/procurement.asp#ixzz4tMqILXvC

In MonsoonSIM, Procurement is one of the core modules. In our model, all purchases must go through Procurement department. Hence, Procurement is one of the most important modules.

MonsoonSIM supports multiple levels of complexity. Learners are encouraged to start with the basic module, called Baseline model, and slowly progress to more advanced functionalities.

Here are some of what you will learn in the MonsoonSIM Procurement (Baseline):

- How purchasing and payment transactions are recorded in Accounting
- How to analyze vendor performance
- How the entire process from Procurement to Payment works
- Concept of vendor Lead Time
- Concept of late delivery
- Concept of Purchase Order
- Concept of Purchase Request
- Concept of Bulk Discount
- Concept of Price fluctuation due to demand pressure
- Concept of staff impacts (both in terms of staff competency as well as headcounts)

Here are some of what you will learn in the MonsoonSIM Procurement (Advanced):

- Concept of Future Delivery
- Concept of Blanket PO
- Concept of Vendor Credit Limit
- The effect of currency exchange on product pricing

In MonsoonSIM, the Procurement module is related to the following department (modules)

- Finance (FIN)
- Retail (RTL)
- Marketing (MKT)
- Warehouse / Logistics (WHS)
- Production (PRD)
- Maintenance (MNT)
- Human Resources Management (HCM)

Note: There is no pre-requisite to learning the MonsoonSIM Baseline concepts
Operating model [Procurement Module]

The following describes the operating model of MonsoonSIM Procurement module

Baseline:

- To make a purchase, one must make a request, called Purchase Requisition (PR)
- PR must be approved, to be converted into Purchase Order (PO)
- All purchases are on Cash On Delivery basis
- Purchase Request approval will fail if:
  - there are not enough funds at the moment to cover the PR
- PO cannot be canceled or modified
- The PR will clearly state the purpose of the purchase, to whom, due date, amount and other important information
- PO can be generated manually, or by MRP (see more in MRP)
- There are many types of vendors:
  - Finished Goods (FG) Vendor
  - Raw Materials (RM) Vendor
  - Vendors that sell machine
  - Vendors that provide transport
  - Vendors that provide services to our HR department such as Training, etc
- Finished Goods and Raw Materials vendors have their own Lead Time
- Goods and materials will arrive based on the Lead Time specified, however, some vendors have the tendency to be late
- Upon the delivery day, delivery can still be a delay if:
  - there are not enough funds
- When there is a demand pressure, the Finished Goods and Raw Materials vendor may raise their selling prices. The price will stabilize again when the demand on the vendors subside
- FG and RM vendor may issue complaints if our Staff Index is low (see HR for more about Staff Index)
- Unhappy FG and RM may also raise their selling prices
- If a product is an imported product, the selling price of that product will also be raised by the vendor as the foreign currency gets stronger over our local currency. Similarly, if the foreign currency is getting weaker in relation to local currency, the vendors will drop their selling prices for this imported product
- Staff Index affects the effectiveness of our procurement. Hence, it is important to keep our staff index at 100% at all times.
- Players can analyze the purchasing performance and other useful intelligence by carefully examining the information from the vexplorer

Advanced:

- Finished Goods and Raw Materials vendors have their own Credit Limit
- Payment to the vendor depends on the terms of payment specified by the vendor
- Once delivered, an Account Payable is automatically triggered in the Accounting
- When payment date is due, our finance will make the payment and the Account Payable will be reversed
- If there are not enough funds to pay on the due day, a late payment incident will be recorded and payment will be automatically made once enough funds are available
- Teams may place Blanket Order
  - good for supply chain planning
  - shipment can be broken down into chunks so the delivery and payment can also be made by chunks
- Teams can also schedule a Future Delivery order
  - good for supply chain planning
  - shipments can be scheduled further into the future and so are the delivery and payment
MonsoonSIM Procurement Micro Concepts

1. Concept Title: Purchase Request (PR) & Purchase Order (PO) [ID: 3524]

Level

BASIC

Background

A purchase request is a request from a department to the procurement area for purchasing a specific item or service. A purchase order (PO) is a commercial document issued by a buyer to a seller, indicating types, quantities, and agreed prices for products or services. It is used to control the purchasing of products and services from external suppliers.

Purpose

To demonstrate the concept of how to request for a procurement through Purchase Request and the eventual issuance of the Purchase Order

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Run the game
5. Taking role as one of the players and open up the player screen
6. Create some Purchase Requests for the followings:
   • Buy apple juice from vendor A
   • Buy orange juice from vendor B
7. Approve all the Requests. Upon approval, MonsoonSIM will convert the Purchase Request (PR) to Purchase Order (PO)
8. Open the PO list and observe the PO details, including:
   • initiator
   • the product or service purchased
   • the issue day, need day, approve day and done day
9. You could see the status in the PO list. There are 4 types of status:
   • Requested - the order is still considered a Purchase Request, pending approval
   • Approved - the order is now considered a PO and has been delivered to the vendor and the order is in process
   • Canceled - the PO is canceled due to not enough funds or someone cancels the PO
   • Completed - the order has been completed / delivered

Reset to Day 0 and repeat the process if necessary
2. Concept Title : Vendor (Supplier) Bulk Discount [ID: 3550]

Level
BASIC

Background
It is a financial incentive for individuals or businesses that purchase goods in multiple units or in large quantities. The seller or manufacturer rewards that buying in bulk by providing a reduced price for each good or group of goods.

Volume discounts allow businesses to purchase additional inventory at reduced cost, and allow sellers or manufacturers to reduce inventory by selling more units to incentivized buyers.

Source

Purpose
To explain about the concept of Vendor Bulk Discount

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Do not run the game
5. Taking role as one of the players and open up the player screen and note down your current cost of the products
6. Run the game
7. Purchase some goods with bulk discounts. But before placing order, compare the vendor offers. See which of the vendor provide good bulk discounts
8. Place the orders and wait for shipments
9. When the orders arrived, observe your new average cost of the products has been reduced due to the discounts given on your new goods
10. Further considerations:
   - Getting bulk discount is good way to reduce cost and increase profit, but how do you avoid buying too much because you may not be able to sell them fast enough
11. As the Certified Trainer, you can
   - observe how the teams’ average cost by using the Observation Module

Reset to Day 0 and repeat the process if necessary
3. Concept Title : Vendor (Supplier) Lead Time [ID: 3526]

Level

BASIC

Background

The lead time is the delay applicable for inventory control purposes. This delay is typically the sum of the supply delay, that is, the time it takes a supplier to deliver the goods once an order is placed, and the reordering delay, which is the time until an ordering opportunity arises again. This lead time is usually computed in days.

Source

Purpose

To demonstrate that all Vendor (Supplier) has a Lead Time. It is the time taken for them supplier to deliver the goods upon receiving our Purchase Orders

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Run the game
5. Taking role as one of the players and open up the player screen
6. Try to buy the some products from both vendors within the same day, before placing the order, observe their promised Lead Time
7. Place the orders
8. Continue to monitor the PO List, pay attention to the Day Need, Day Issue, Day Approved and Day Done
9. Observe
   - which vendor is the best in keeping the best delivery time
   - which vendor deliver based on their promised Lead Time
10. Further consider the followings:
    - In order to ensure that we always have enough stock in our retail stores, and based on the Vendor Lead Time and the market demand, how often do we need to do procurement and from which vendor?

Reset to Day 0 and repeat the process if necessary
4. Concept Title: Vendor Dynamic Pricing [ID: 3517]

Level
BASIC

Background

The two types of dynamic pricing are:

1. **Revenue management**, driven by changes in demand.
2. **Supply-driven**, driven by price-matching or competitor out-of-stocks.

**Revenue management** adapts prices to changes in demand or availability of supply. You have experienced this if you've ever taken an Uber at a surge price, or flown on a commercial airline. Even some rental car companies and hotels use this type of dynamic pricing. MonsoonSIM is using this type of dynamic pricing.

**Supply-driven**, can have a significant impact as well. Companies either raise or lower prices based on what competitors are doing, or they mark down inventory to clear room for new inventory soon to arrive and recover cash tied up in the inventory that hasn't yet sold. Amazon changes prices more than 15 times per day on some products, based on what specific competitors are selling the same products for, and whether they are in stock.

Source

Purpose

To demonstrate how Vendor prices sometimes fluctuate depending on the demand of the market

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Set the Seconds Per Day to 40 to slow down the game
5. Run the game
6. Taking role as one of the players and open up the player screen
7. Click Procure Finished Goods and observe the offer prices for Apple Juice from the 2 vendors
8. Procure a large order of say 40000 Finished Goods from Vendor 1
9. Place the orders
10. While the PO is in the process of being delivered, repeat Step 6
11. Observe that the prices of Apple Juice from VFG1 has gone up
12. Taking role as another player from another team and open up the player screen
13. Observe that the prices of Apple Juice from VFG1 has gone up, also for this team
14. Wait till the order is delivered and repeat Step 6
15. Observe that the prices of Apple Juice has returned to the previous level
16. In Summary
   - When someone place a large order, the big demand may drive up the prices in the market. This is basic economy theory of demand and supply. When demand increases, so is the price.

Reset to Day 0 and repeat the process if necessary
5. Concept Title : Future Delivery [ID: 3516]

Level

ADVANCE

Background

Future Delivery is an arrangement that allows you to book and pay for goods sometimes in the future. This is useful if you want to purchase goods for a special occasion (i.e. holidays) to ensure the availability of the goods.

Purpose

To demonstrate the concept of Future Delivery

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Configure:
   - Turn On Blanket Purchase in PMN Run Time Menu
4. Initialize Game to Day 0
5. Run the game
6. Taking role as one of the players and open up the player screen
7. Purchase Apple Juices but select Advance Purchase
8. Set the delivery to be sometime in the future
9. Observe:
   - That shipment will arrive based the time you have specified
   - That the Cash will not be deducted until every shipment has arrived
   - That once all the products have arrived, the PO will be marked COMPLETED
   - That your have “locked in” the price of the Goods up front, even though you are taking deliveries in the future
10. Things to ponder:
    - If we know our demands and we have limited cash flow and we wish to run a lean warehouse, perhaps we could make use Blanket PO to improve our supply chain execution

Reset to Day 0 and repeat the process if necessary
6. Concept Title : Blanket Purchase Order [ID: 3515]

Level

ADVANCE

Background

A Blanket Purchase Order (BPO) is the preferred method for placing orders which will require multiple payments over a period of time.

When to use:

- The goods or services are reoccurring purchases.
- The goods or services on an order may change over time.
- The maximum order amount may need to be adjusted over time.
- The order has specific contract start and end dates.

Source

Purpose

To demonstrate another preferred method for placing orders which require multiple payments over a period of time

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Configure:
   - Turn On Blanket Purchase in PMN Run Time Menu
4. Initialize Game to Day 0
5. Run the game
6. Taking role as one of the players and open up the player screen
7. Purchase Apple Juices but select Blanket Purchase
8. Select 20% shipment for every 5 Day
9. Observe:
   - that shipment will arrive based on the time table of 20% every 5 days
   - that the Cash will not be deducted until every shipment has arrived
   - that once all the products have arrived, the PO will be marked COMPLETED
   - that your have "locked in" the price of the Goods up front, even though you are taking deliveries in the future
10. Things to ponder:
    - If we know our demands and we have limited cash flow and we wish to run a lean warehouse, perhaps we could make use Blanket PO to improve our supply chain execution

Reset to Day 0 and repeat the process if necessary
7. Concept Title: Credit Limit (Vendor) [ID: 3561]

Level
ADVANCE

Background
When a seller make a sale to a buyer with a payment term, he grants a loan to its customer. This loan will be resorbed only after bills are paid.

The credit limit is the maximum amount of loan that the seller accepts to grant to its customer. Setting a credit limit is important for any business as it allows you to stipulate a maximum amount of loan you can provide to your customers.

Purpose
To demonstrate the concept of Vendor / Supplier Credit Limit

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. In FIN run-time parameter, config to allow Accrual System
4. In the Accrual System sub-menu, config to allow Vendor Credit Limit
5. Initialize Game to Day 0
6. Run the game
7. In PMN run-time parameter, observe that the Credit Limit of the Finished Goods vendors are set to a specified limit (ex: 4,000,000)
8. Taking role as one of the players and open up the player screen
9. Click the procure menu and observe the current credit limit from the Finished Goods vendors
10. Click and submit to procure all the Finished Goods, in large quantity, to the warehouse
11. When the produce has arrived and before you have paid the vendor, click the procure menu again and observe the current credit limit available from the vendors. You can observe that the credit limit from the vendor has been reduced by the amount of PO un-paid (outstanding).
12. Observe your Account Payable menu and notice that you have upcoming payment
13. As soon as payment is made after the a few days (depending on the Terms Of Payment), click the procure menu again and observe the current credit limit, you can observe that the credit limit has returned to the maximum level configured

Reset to Day 0 and repeat the process if necessary
MonsoonSIM Procurement KPIs

1. Vendor late delivery
2. Vendor late delivery - by Finished Goods Vendors
3. Vendor late delivery - by Raw Material Vendors
MonsoonSIM Retail Module

Background [Retail Module]

A retail sale occurs when a business sells a product or service to an individual consumer for his or her own use.

Read more: https://www.shopify.co.uk/encyclopedia/retail

In MonsoonSIM, Retail is one of the core modules. In our model, all retail sales occur in the virtual retail stores.

MonsoonSIM supports multiple levels of complexity. Learners are encouraged to start with the basic module, called Baseline model, and slowly progress to more advanced functionalities.

Here are some of what you will learn in the MonsoonSIM Retail (Baseline):

- How retail and income transactions are recorded in Accounting
- How to analyze sales performance
- Concept of market demand
- Concept of price elasticity
- Concept of space utilization, limitation, and constraints
- Concept of stockout (running out of stock)
- Concept of stock replenishment
- Concept of marketing impact on sales
- Concept of holidays on sales demand
- Concept of forecast on sales performance and inventory control
- Concept of staff impacts (both in terms of staff competency as well as headcounts)

Here are some of what you will learn in the MonsoonSIM Procurement (Advanced):

- Concept of foreign exchange fluctuations on the cost of imported product

In MonsoonSIM, the Retail module is related to the following department (modules)

- Finance (FIN)
- Procurement (PMN)
- Marketing (MKT)
- Warehouse / Logistics (WHS)
- Human Resources Management (HCM)

Note: There is no pre-requisite to learning the MonsoonSIM Baseline concepts
Operating model [Retail Module]

The following describes the operating model of MonsoonSIM Retail module

- All retail sales are based on cash basis, no credit are available for retail customers
- Sales are affected by pricing, marketing, competitors' pricing, competitors' marketing, and our own staff index. Sales are also affected by whether our competitors have run out of stock
  - Lower price usually increases unit sold. The level of sales increase depends on the price elasticity of the area. For some area, the impact is higher while in some area, the price change impact may have very little effect on the unit sold
  - Marketing generally increases unit sold. However, it depends on the marketing media chosen (see marketing operation model)
  - If our competitor increases its product price, our sales will generally increase. However, once again, it depends on the price sensitivity for the area. The level of impact varies from one area to another
  - Staff index also affects our sales. Hence, it is important to always maintain our staff index at 100%
- There are up to 3 retail stores players must manage
- All stores are considered rental stores and rent is paid on daily basis
- The rental price for retail store is higher than the rental price for the warehouse
- Each product will consume a certain amount of retail storage space
- Players can increase or decrease the rental space
- Total products in store must be less than storage space to avoid paying overflow penalties
- Players can freely move stock from one store to another, including to the warehouse
- Players should consider replenishment from warehouse, instead of from other stores, as warehouse usually has bigger storage capacity
- Holidays will significantly impact the market demand
- Retail Sales demand can be seen from the forecast, which is very predictable
- Staff Index affects the effectiveness of our retail sales. Hence, it is important to keep our staff index at 100% at all times.
- Players can analyze the sales performance and other useful intelligences by carefully examining the information from the Business Intelligence explorer
MonsoonSIM Retail Micro Concepts

1. Concept Title : Retail Demand (Cycle Stock) [ID: 3512]

Level
BASIC

Background
Cycle stock is the average amount of inventory a business needs to meet customer demand between the times it orders more inventory from suppliers. A company goes through its cycle stock inventory as it sells products and restocks inventory.

Source

Purpose
To explain about the concept of Retail market demand

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Do not run the game
5. Taking role as one of the players and open up the player screen
6. Observe:
   a. unit sold (Market Demand) for product 1,2,3 for the three areas
   b. which area has the highest demand, which has lowest
7. Further consider the followings:
   a. Based on the current rate of sales, how many days to go before we run out of stock?
   b. How much demand changes when you change your sales price?
   c. Since the demand for each area is different, if I were to replenish the product efficiently, how much do I need to ship and how often?
8. As the Certified Trainer, you can
   a. observe Retail Sales, Unit Sold by using the Observation Module

Reset to Day 0 and repeat the process if necessary
2. Concept Title: Retail Space Planning [ID: 3523]

Level

BASIC

Background

The most basic benefit of a space planning is to understand how your organization is using its spaces. What spaces are occupied? Where are certain stores located? How's the demand?

After you understand your current space usage, you can then optimize that usage and make the most out of your spaces. Some ways you may improve space usage include by identifying underutilized space. Are you paying for more than what you actually need?

Purpose

To demonstrate that some products require enough physical space for storage and for display in retail stores. Lack of space may incur additional rental overflow costs.

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Do not run the game
5. Taking role as one of the players and open up the player screen
   - From Info-Retail menu, examine the physical dimensions of the product
   - Determine the physical area required to store each product
   - Cross check the area usage against the total area consumed by the total number of products
   - Note that for simplicity, MonsoonSIM assumes non-stackable product, hence, we only need to worry about "area", instead of "volume"
6. Run the game
7. Try to buy more products so that the total product space needed is more than current rental space
8. When the products arrive, observe the overflow costs incurred in the area where you have more products that the area can store
9. Try to increase the rental space to see if you can reduce or avoid the overflow costs
10. Further consider the followings:
   - In order to ensure that we always have enough stock in our retail stores, and based on the Vendor Lead Time, the market demand and the product dimensions, how much space do we need?

Reset to Day 0 and repeat the process if necessary.
3. Concept Title : Impact of Price change on Retail Sales [ID: 3513]

Level

BASIC

Background

Price increases for a good or service offered by your business will have an effect on the sales volume of that good or service. How price increases affect consumer demand and subsequently sales volume involves several key factors, making selecting a pricing strategy a complex task you need to put thought and research into.

Source

Purpose

To demonstrate how the changes in pricing can affect the consumer behaviors. In an assumed totally free market economy, increase in price will result in the decrease in demand and vice versa.

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Do not run the game
5. Taking role as one of the players and open up the player screen
   - Click Set Price
   - Change one of more prices by about 30%
   - Wait for few days
   - Click Chart Unit Sold.
   - Observe Unit sold before and after the price change
6. Click Chart Sales. Observe Daily sales before and after the price change
7. Open up Accounting. Observe Daily sales before and after the price change
8. As Certified Trainer control panel, observe :
   - Prices
   - Total Unit sold
   - Total Sales - Retail Sales
   - Margin - Retail Sales
9. How has the price change of one team affects the sales of the other teams?
10. Further consider the followings:
    - What if one increases the prices by 400%?
    - Should we consider price elasticity when we determine the product prices?
    - What if other teams have run out of product in their retail stores, can we increase our prices significantly and still sell?

Reset to Day 0 and repeat the process if necessary
MonsoonSIM Retail KPIs

1. Utilization - Retail Space
2. Retail Stock out
3. Margin - Gross Profit - Retail
4. Sales - Retail
5. by Retail stores - Price - by Finished Goods
6. by Retail stores - Inventory - by Finished Goods
7. by Retail stores - Unit Sold - by Finished Goods
8. by Retail stores - Sales - by Finished Goods
9. Utilization - Area - by Retail stores
10. by Retail stores - Sales - by Finished Goods
MonsoonSIM Marketing Module

Background [Marketing Module]

Marketing are activities of a company associated with buying and selling a product or service. It includes advertising, selling and delivering products to people.

Read more: Marketing [Link](http://www.investopedia.com/terms/m/marketing.asp#ixzz4tXyQjzR9)

In MonsoonSIM, Marketing is one of the core modules. In our model, marketing affects our retail sales.

MonsoonSIM supports multiple levels of complexity. Learners are encouraged to start with the basic module, called Baseline model, and slowly progress to more advanced functionalities.

Here are some of what you will learn in the MonsoonSIM Marketing (Baseline):

- Concept of market analysis
- Concept of Return on Investment on marketing
- Concept of market segmentation

In MonsoonSIM, the Marketing module is related to the following department (modules):

- Finance (PMN)
- Retail (RTL)
- Human Resources Management (HCM)

Note: There is no pre-requisite to learning the MonsoonSIM Baseline concepts
Operating model [Marketing Module]

The following describes the operating model of MonsoonSIM Marketing module

[Baseline]

- Marketing investment to improve your retail sales
  - To make a marketing investment, one must go through Purchasing department to make a request, called Purchase Requisition (PR)
  - There are 3 marketing media (vendors) available
  - Each media (vendor) will yield different R.O.I (Return On Investment)
  - Some media can be particularly good for certain product
  - Some media can be particularly good for certain area
  - The ROIs of the media is randomly determined the system upon session initialization
  - Learners are expected to observe the ROIs by observing the unit sold vs the marketing investment using the Business Intelligence explorer
  - Once you have discovered the ROI of the media, you should take advantage of such knowledge to boost your retail sales
  - The amount of marketing spending is on per virtual-day basis

- Market Intelligence
  - There is a marketing report available for purchase
  - Each marketing report will give market insights on the retail sales market (collected from all other players). Examples
    - Market share for unit sold for Retail market
    - Market share for total sales for Retail market
    - Our sales compared to the market
    - Our unit sold compared to the market
    - Our prices compared to the market
  - Marketing spendings will be treated as expenses
  - Staff Index affects the effectiveness of our marketing. Hence, it is important to keep our staff index at 100% at all times.
MonsoonSIM Marketing Micro Concepts

1. Concept Title : Market Intelligence [ID: 3556]

Level
BASIC

Background

Market Intelligence is the information relevant to a company’s markets, gathered and analyzed specifically for the purpose of accurate and confident decision-making in determining market opportunity, market penetration strategy, competitor analysis, and market growth predictions.

Source

Purpose

To demonstrate the concept of using Market Intelligence to help our business

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Run the game
5. Taking role as one of the players and open up the player screen
6. Make some price changes
7. Make some goods purchases
8. Make some marketing investments
9. Continue running for about seven days
10. Buy marketing report
11. When the report is delivered, stop the game and observe:
   - how our sales is compared to the other teams
   - how our prices are compared to the other teams
   - how our total unit sold are compared to the other teams
   - how our total marketing investment are compared to the other teams
12. Further consider the followings:
   - Now that we can find out about the market places, how can we fully take advantage of such information?
   - Can we tell if any of the teams have overpriced their products?
   - Can we use the information to adjust our pricing and marketing investment strategy?
   - Since marketing report only gives you intelligence of the last 10 days, how often do we need to buy the report?
13. As the Certified Trainer, you can always use Observation modules to observe
   - Sales
   - Unit Sold
   - Pricings

Reset to Day 0 and repeat the process if necessary

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2. Concept Title : Marketing Investment [ID: 3555]

**Level**

BASIC

**Background**

Marketing a product could be expensive across various avenues available such as a website, social media, print, magazines, or hoardings. To gauge the effectiveness of the marketing campaign, companies resort to ROMI (Return on Marketing Investment).?

**Source**

**Purpose**

To explain the concept of Marketing Investment

**Steps**

1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Run the game for three days and stop
5. Observe the unit sold of the last three days, write down the unit sold per area per product
6. Run the game again and schedule to stop in three days
7. As soon as possible, set marketing expense using one of the marketing programs for one of the products in one of the areas
8. When the game stops, observe the change in unit sold before and after the marketing investment
9. Also compare the sales of the promoted product against the other un-promoted products
10. Repeat steps above, this time using other marketing programs on other products and areas
11. Further considerations:
   - What is the R.O.I (Return On Investment) for each of the program for each area and each product?
   - Are all the marketing programs produce the same results in terms of R.O.I?
12. As Certified Trainer, you can always use Observation modules to:
   - observe the Unit Sold of the teams
   - observe the Pricing of the teams
   - observe the Retail margins of the teams

Reset to Day 0 and repeat the process if necessary
3. Concept Title: Market Share [ID: 8281]

Level

BASIC

Background

The market share represents the percentage of a market's total sales that is earned by a company over a specified time period. This is used to give a general idea of the size of a company in relation to its market and its competitors.

A company that is growing its market share will be growing its revenues faster than its competitors.

Market share increases may allow a company to achieve greater scale in its operations and improve profitability. Companies are always looking to expand their share of the market, in addition to trying to grow the size of the total market by appealing to larger demographics, lowering prices, or using advertising.

Purpose

To explain the concept of Market Share

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Run the game for ten days, focus on 1 team sales, and buy a marketing report
5. Observe the market share on the marketing report
6. Compare your market share against the other team (which are not being played), which team own the most market share?
7. Further considerations:
   - How to maintain your market share growth?
   - Push the sales through marketing, etc to get a larger share of market share

Reset to Day 0 and repeat the process if necessary
4. Concept Title : Marketing ROI Analysis [ID: 3519]

Level

ADVANCE

Background

Marketing is not an exact science, but it is getting better. The biggest questions companies have about their marketing campaigns is what return on investment (ROI) they are getting for the money they spend.

You can take the sales growth from that business or product line, subtract the marketing costs, and then divide by the marketing cost like so:

\[
\text{ROI} = \frac{\text{Sales Growth} - \text{Marketing Cost}}{\text{Marketing Cost}}
\]

For example, if sales grew by $1,000 and the marketing campaign cost $100, then the simple ROI is 900% \(\left(\frac{1000-100}{100}\right)\). To really get at the impact, however, you can get a little more critical. Using a 12-month campaign lead up, you can calculate the existing sales trend.

Source

Purpose

This is to demonstrate how one can use data analytical tool to measure the marketing returns.

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Turn on Data Analytics marketing run-time parameter
4. Initialize Game to Day 0
5. Run the game for three days and stop
6. Taking role as one of the players and open up the player screen
7. Using Data Analytic, observe the unit sold of the last three days, write down the unit sold per area per product
8. Run the game again and schedule to stop in three days
9. As soon as possible, set marketing expense using Markeing Program 1 of 400 SGD for all products at all areas
10. When the game stops, observe the change in unit sold for all products in all areas using the Data Analytic feature
11. Note down the increase in trading profit \(\left(\text{increased unit sold} \times \text{sales} - \text{COGS}\right)\) you have generated as the result of your marketing investment, call this “X”
12. Repeat steps above, this time using Marketing Program 2, compare the “X”s
13. Observe that some marketing program give bigger “X” for certain product compare to the others
14. Observe that some marketing program give bigger “X” for certain area compare to the others
15. Further considerations:
   - Now that we know which marketing program is best for which area or which product, how do we take advantage of it?
   - What is the R.O.I (Return On Investment) for each of the program for each area and each product?
16. As Certified Trainer, you can always use Observation modules to:
   - observe the Unit Sold of the teams
   - observe the Pricing of the teams
   - observe the Retail margins of the teams

Reset to Day 0 and repeat the process if necessary
MonsoonSIM Marketing KPIs

1. Marketing Investment - by Retail stores - by Finished Goods
2. Market Share - unit sold - retail
3. Market share - unit sold - retail
4. Market Share - sales - retail
5. Market share - sales - retail
MonsoonSIM Forecast Module

Background [Forecast Module]

Forecasting is the use of historical data to determine the direction of future trends. Businesses utilize forecasting to determine how to allocate their budgets or plan for anticipated expenses for an upcoming period of time. This is typically based on the projected demand for the goods and services they offer.


In MonsoonSIM, Forecasting is one of the core modules. In our model, the forecasted data and trends are assumed to be fairly accurate. Hence, players should be able to execute their strategies accordingly.

MonsoonSIM supports multiple levels of complexity. Learners are encouraged to start with the basic module, called Baseline model, and slowly progress to more advanced functionalities.

Here are some of what you will learn in the MonsoonSIM Forecasting (Baseline) :

- Concept of inventory planning based on future demand
- Concept of capacity planning based on future demand
- Concept of production planning based on future demand
- Concept of cash flow planning based on future demand

Here are some of what you will learn in the MonsoonSIM Forecasting (Advanced) :

- Concept of foreign exchange impact on cost of imported goods and materials

In MonsoonSIM, the Forecast module is related to the following department (modules) :

- Finance (FIN)
- Retail (RTL)
- B2B / Wholesales (B2B)
- Human Resources Management (HCM)

Note: There is no pre-requisite to learning the MonsoonSIM Baseline concepts
Operating model [Forecast Module]

The following describes the operating model of MonsoonSIM Forecast module:

- Players can observe the forecast in the following areas:
  - Retail market demand
  - B2B market demand
  - Currency exchange

- Retail Forecast
  - The forecasts is for the per day unit demands for each of the product assuming all competitors do not change their pricing and have adequate amount of supplies.
  - However, the daily actual unit sold per team may vary from team to team, this is because the actual retail unit sold relies on other factors such as pricing (yours in comparison with your competitors), marketing (yours in comparison with your competitors), price elasticity and whether your competitors ran out of stocks or not.
  - Generally, if the overall prices are high, the accumulated demand will drop and vice versa.

- B2B Forecast
  - The forecasted data are fairly accurate and players can rely on the information for planning and execution.
MonsoonSIM Forecast Micro Concepts

1. Concept Title : Retail Forecast [ID: 3514]

Level

BASIC

Background

Sales forecasting is the process of estimating future sales. In retail management, forecasting serves to predict and meet the demands of consumers in retail establishments while controlling pricing and inventory.

Holding excess inventory adds to overhead costs for a business. When forecasting helps the retailer to meet the demands of the customer by understanding consumer purchase patterns better, more efficient use of shelf and display space within the retail establishment is the result, in addition to the optimal use of inventory space.

Source

Purpose

This is to show the concept of using Forecast to help our Retail business

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Run the game for three days and stop
5. Taking role as one of the players and open up the player screen
6. From the Retail charts, observe the daily unit sales for each of the product for each of the area
7. Compare the unit sales observed in against the Forecast chart for Retail Sales
8. Observe any demand spikes in upcoming days
9. Further considerations:
   - Given you can reasonably predict the demand of the Retail sales from the Forecast charts, what action you must take to advantage of having such information? What much products do you need to procure to ensure you can meet the demand?

Reset to Day 0 and repeat the process if necessary
2. Concept Title : B2B Market Demand [ID: 3528]

Level

BASIC

Background

Purpose

To demonstrate the wholesales (B2B) market demand for each product. Market Demand often affect how we plan and schedule our product replenishment and/or production

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Run the game
5. Taking role as one of the players and open up the player screen
6. Click Wholesales forecast chart. Observe:
   - Market Demand for the products in coming days. Which are in high demand? Which will be slow to move?
   - Compare the observations with the actual B2B (wholesales) demand coming from the B2B offer. They should track each other fairly good.
7. Based on the current forecast, think of :
   - how many products should we stock?
   - how many of our slow moving products we have currently onhand? and what can we do about it?
8. Further investigate:
   - how demand form the Retail can affect our decisions when it comes to Wholesales (B2B)?
   - if Forex was being turned ON, what impact does the rise or fall in the foreign currency have on our B2B strategy?

Reset to Day 0 and repeat the process if necessary
MonsoonSIM Forecast KPIs

There are no KPIs defined yet
MonsoonSIM Warehouse/Logistic Module

Background [Warehouse & Logistic Module]

Warehousing is the act of storing goods that will be sold or distributed later. While a small, home-based business might be warehousing products in a spare room, basement, or garage, larger businesses typically own or rent space in a building that is specifically designed for storage.

Logistics is generally the detailed organization and implementation of a complex operation. In a general business sense, logistics is the management of the flow of things between the point of origin and the point of consumption in order to meet requirements of customers or corporations.


In MonsoonSIM, Warehouse and Logistic are combined, and it is one of the core modules.

MonsoonSIM supports multiple levels of complexity. Learners are encouraged to start with the basic module, called Baseline model, and slowly progress to more advanced functionalities.

Here are some of what you will learn in the MonsoonSIM Warehouse and Logistics (Baseline):

- Concept of capacity planning
- Concept of product allocation
- Concept of replenishment
- Concept of automated replenishment
- Concept of fixed and variable delivery cost
- Concept of third party shippers (deliverers)

Note: There is no pre-requisite to learning the MonsoonSIM Baseline concepts

In MonsoonSIM, the Warehouse and Logistics module is related to the following department (modules)

- Finance (FIN)
- Retail (RTL)
- Procurement (PMN)
- B2B / Wholesales (B2B)
- Productions (PRD)
- Human Captial Management (HCM)

Note: There is no pre-requisite to learning the MonsoonSIM Baseline concepts
Operating model [Warehouse & Logistics Module]

The following describes the operating model of MonsoonSIM Warehouse & Logistics module

[Baseline]

- Rent for warehouse is significantly lower than rentals for the retail stores
- Warehouse area is initially set at a much higher value than the retail stores
- Players can set automatic replenishment by using minimum stock trigger points and minimum shipment quantity
- The warehouse will be used for the followings:
  - as storage for finished goods
  - as storage for raw materials
  - as storage for production machines
  - as a place for stocks allocated for shipment or replenishment
  - as a place where maintenance is performed on the machines
  - as a place for the entire production process to take place
- All shipment are assumed provided by third-party logistics companies
- No partial shipment supported
- Shipment will commence as soon as the goods are fully allocated
- The delivery time depends on the distance between the source and destination
- The delivery will include both fixed and variable costs
- Delivery costs will be booked as expenses
- The speed of product allocation for shipment will depend on the Staff Index. Hence, it is always good to keep Staff Index at 100%
- Players can analyze the sales performance and other useful intelligence by carefully examining the information from the Business Intelligence explorer
MonsoonSIM Warehouse/Logistic Micro Concepts

1. Concept Title : Move Stock [ID: 3527]

Level
BASIC

Background
Inventory management is the process of efficiently overseeing the constant flow of units into and out of an existing inventory. This process usually involves controlling the transfer in of units in order to prevent the inventory from becoming too high or set a specific to levels that could put the operation of the company efficiently.

Calculating what is known as buffer stock is also key to effective inventory management. Essentially, buffer stock is additional units above and beyond the minimum number required to maintain production levels.

Purpose
To demonstrate how to move stocks amongst retail stores and warehouse

Steps
1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Run the game
5. Taking role as one of the players and open up the player screen
6. Move stocks by creating a Move request, moving from one location to the other
7. Approve your Move Request
8. Watch the Move list and observe that all stocks must be fully allocated before the shipment can begin
9. Observe the distance and the fees involved in the move
10. Note that duration of the move is depending on the distances between the two points
11. When the move is completed, the fees are collected by the shipping company
12. Observe the logistic cost booked in the Accounting under Operating Expenses
13. Further consider the followings:
   - Warehouse rent is much lower than Retail store. To reduce cost, it is obviously better to buy in bulk keep inventory in warehouse. However, when replenishing the Retail Store, is it worth to first procure from Vendor and take delivery in our warehouse and then get a shipping party to ship to the Retail Stores? What about getting our Vendors to deliver straight to our Retail Stores?

Reset to Day 0 and repeat the process if necessary
2. Concept Title: Warehouse Capacity [ID: 3525]

Level
BASIC

Background
Theoretical capacity is the actual physical capacity of the space dedicated for storage. So if you have a simple warehouse setup with 1,000cm² locations all designed for 10cm² units, your theoretical capacity would be 100 units.

There must be enough capacity for stock in the warehouse to meet required demand. The amount of product required will normally be determined by inventory planning and replenishment software such as MRP, which may calculate two types of stock requirement:

- Cycle stock – stock required to meet expected demand until the next receipt of stock from the supplier or replenishing warehouse
- Safety stock – buffer stock to allow for spikes in demand outside normally predicted parameters.

Purpose
To demonstrate that some products require enough physical space for storage. Lack of space may incur additional rental overflow costs

Steps
1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Run the game
5. Taking role as one of the players and open up the player screen
6. Buy 60,000 units of apple juice and get delivered to the warehouse
7. Calculate the area of the total products purchased. You can find out the physical dimensions of the product from the configuration.
8. Observe the area usage and compare the total available area
9. Given the initial available area of 1000 (unit square), how many of the same product can you purchase before you need to pay overflow penalty
10. Continue to buy the same product until you have overflowed the warehouse
11. Observe the Operating cost in your Accounting. Observe that now you have to pay warehouse rent as well as the warehouse overflow fee
12. Use Rental Space Management menu to increase your rental space

Reset to Day 0 and repeat the process if necessary
3. Concept Title : Reorder Point [ID: 3549]

Level

BASIC

Background

You have a great product, and it’s selling fast. Every customer purchase means more revenue, but also brings your inventory levels lower. Of course you’ll reorder before it goes out of stock, but if you order too early, you’ll need to spend more on storing these excess items. If you order too late, you’ll be facing disappointed customers who’ll look to your competitors.

So, When is the right time to order more stock? There’s few elements you need to consider in making this decision. They are:

- Lead time demand - Shipping’s not instant! it’ll take your supplier time to pack your order and even more time to ship it over to you. This waiting time is what’s known as “lead time”.
- Safety Stock - When things go wrong, safety stock is the stock you carry as a last defense against unpredictable events that either deplete your stock, or unexpected manufacturing time.

For example,

- you’re selling 100 total units over the past 10 days. That means our daily sales is 10 units per day.
- your average delivery lead time for the last 10 days is 2 days lead time for the product to arrive.
- since the average sales are 10 per day, you decided to have a 50 units safety stock so you could have 5 days worth of stock.
- So, the Reorder point is (average daily unit sales x delivery lead time) + Safety stock
  - (10 unit x 2 days) + 50 = 70 unit

This means, once the quantity on-hand for the product hits 70 units, your procurement officer know to put in another purchase order for more of the product. Because they’ve built an average delivery lead time into the reorder point, the stock should arrive before you ever dips below the amount of safety stock.

Purpose

Reorder Point is to prevent product shortage. It is a level of inventory which trigger automatic replenishment request.

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Run the game
5. Taking role as one of the players and open up the player screen
6. Observe that the stocks in the retail stores are starting to deplete
7. Go to Warehouse & Logistics and click the Auto Replenishment menu
8. Follow the instructions and set Reorder Point for Product 1 in Area 1 to 5000 and schedule to ship 4000 units
9. Let the game continue to run until you notice that Product 1 in Area 1 has dropped below 5000 units
10. Observe that a new Move Request (from your Inbox at very right of your menu bar) has been triggered by this Reorder Point
11. Open up the Inbox and you should see that a Move Request has been triggered and the amount of Product 1 to be shipped is 4000, which is the exactly the amount set up above
12. Further considerations:
   - With auto replenishment, Retail stores can avoid running out of stock. But what if there are no
goods available in the warehouse. These outstanding move requests will never be completed!
• Based on the Market Demand from Retail Forecast, exactly what is the Reorder Point to avoid stockout at the retail stores? 3000? 5000? 8000? And by how much we should ship?

Reset to Day 0 and repeat the process if necessary
MonsoonSIM Warehouse/Logistic KPIs

1. Utilization - Warehouse Area - by Warehouses
2. by Warehouses - Inventory - by Finished Goods
3. Utilization - Warehouse Space - Accumulated
4. by Warehouses - Raw Material - by Raw Materials
5. Inventory Procured - by Finished Goods
6. Inventory Procured - by Raw Materials
7. by Warehouses - Unit Sold - by Finished Goods
MonsoonSIM B2B Module

Background [B2B Module]

Wholesaling (B2B) is the sale and distribution of goods to specific customer types such as those most commonly referred to as resellers. Resellers are traditional retailers, other wholesalers or merchants who will resell the good to an end user.


In MonsoonSIM, Wholesaling is also referred to as B2B (Business To Business), and it is one of the core modules.

MonsoonSIM supports multiple levels of complexity. Learners are encouraged to start with the basic module, called Baseline model, and slowly progress to more advanced functionalities.

Here are some of what you will learn in the MonsoonSIM B2B (Baseline) :

- Concept of bidding
- Concept of dealing
- Concept of Sales Order (SO)
- Concept of late penalty
- Concept of WTP (Willing To Pay) price in a bid
- Concept of product allocation

Here are some of what you will learn in the MonsoonSIM B2B (Advanced) :

- Concept of Account Receivables
- Concept of customer payment terms

Note: There is no pre-requisite to learning the MonsoonSIM Baseline concepts

In MonsoonSIM, the Warehouse and Logistics module is related to the following department (modules)

- Finance (FIN)
- Warehouse & Logistics (WHS)
- Human Captial Management (HCM)

Note: There is no pre-requisite to learning the MonsoonSIM Baseline concepts
Operating model [B2B Module]

The following describes the operating model of MonsoonSIM B2B module

[Baseline]

- There exists a number of corporate clients
- The corporate clients will seek to buy your products by announcing their desire to purchase your goods via two types of offers
  - straight deal
  - Bidding or Tendering
- Players must compete with other teams in securing the two types of deal specified above
- For a straight-dealing:
  - it is a first-come-first-get model
  - the deal price and all other terms and conditions are all clearly specified
  - striking the deal will automatically create a Sales Order (SO)
  - the SO cannot be canceled
  - the SO must be fulfilled based on the delivery time specified, otherwise, a late penalty shall apply
- For a bid:
  - teams must submit bid price before the bid announcement (open) day
  - winner will be awarded based on the bidder with the lowest price
  - The number of goods required, delivery date, late penalty and other conditions are all clearly specified in the bid
  - if two bidders bid for the same price, the first team to bid will be the winner
  - by the Bid Open (announcement) day, the winner will be declared
  - for the winner, the deal will automatically create a Sales Order (SO)
  - for the losers, the deal will be considered Cancelled
  - some bid requires a minimum amount of bidder. In this case, if the number of bidders is below the minimum bidder level, the bid is considered Cancelled for all bidders
  - a SO cannot be canceled
  - a SO must be fulfilled based on the delivery time specified, otherwise, a late penalty shall apply
- To fulfill the SO, teams can:
  - use existing unallocated stocks
  - procure (outsourced) from finished goods vendors
  - procure raw materials and produce
  - make a stock move by shipping from retail stores back to the warehouse
- Goods will be allocated as soon as there are available un-allocated stock
- No partial delivery is supported
- Shipment will occur as soon as all products for sales are fully allocated
- Shipment will always come from warehouse; if stocks are required to be pulled from retail stores to fulfill a SO, the stocks must first be moved from the retail stores to warehouse for allocation
- Staff Index affects the effectiveness of stock allocation. Hence, it is important to keep our staff index at 100% at all times.
- An accepted B2B order cannot be canceled.
- Players can analyze the sales performance and other useful intelligence by carefully examining the information from the Business Intelligence explorer

[Advanced]

- Payment from a B2B deal depends on the terms of payment specified in the offer
- Once delivered, an Account Receivables are automatically triggered in the Accounting
- When payment date is due, client will pay and the Account Receivables will be reversed
MonsoonSIM B2B Micro Concepts

1. Concept Title : Sales Order [ID: 3520]

Level
BASIC

Background
The Sales Order is a confirmation document sent to the customers before delivering the goods or services. Sales Order (SO) can be created once the quote is accepted by your prospective customer and the Purchase Order (PO) is sent by the customer for further processing.

After receiving the PO, the customers may request SOs to know the exact date of delivery of the goods or services. Also, the inventory/production department looks at the list of Sales Orders to see what needs to be shipped out and when.

After the order is shipped and delivered to the customer an invoice is generated from the sales order for billing purposes. In general, SO contains the SO number, date, line items (products) including the quantities and prices based on the PO, Billing address, Shipping address, and the Terms & Conditions.

Purpose
The Sales Order is a confirmation of an agreed sales of product or services. Typically, a Sales Order (SO) is created once an agreement has been reached through a Purchase Order received from our buyer (customer).

Steps
1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Run the game
5. Taking role as one of the players and open up the player screen
6. Look for B2B offers
7. Find a "Deal" and click on it
8. Observe that you have created a Sales Order (SO)
9. Observe the detail of the Sales Order. Note the details of the SO, which should adequately describe the agreement about you selling a certain amount of goods to the client. Details include the amount agreed, the total number of units to be delivered, the need day and the penalty involved for late delivery
10. Observe that you can also end up getting a Sales Order if you submit a bid on one of the "Bids" available. [This will be covered in other Micro learning topic]
11. Now that you have an agreement to supply to your client, think of:
   - how you can deliver the goods
   - how much of the goods have been allocated for shipment to this client?
   - if there is not enough inventory, where and how you are going to source?
     - which vendor you need to source from?
     - any benefit in getting goods shipped back from the Retail stores?
12. When you have enough goods allocated, the shipment to the client will be done automatically by the system
13. Observe the payment for this particular transactions in the Accounting book
14. Further investigations:
   - What are the factors you consider when you sign the deal?
   - What is the profit margin of the deal you have signed?
   - How significant is the amount of late penalty in comparison to the whole deal?
• What happen if you run out of cash and bank overdraft and you cannot fulfil the deal
15. As the Certified Trainer, you can always use Observation modules to observe
  • Wholesales margin of the teams
  • Capacity utilizations of the teams

?Reset to Day 0 and repeat the process if necessary
2. Concept Title: Bidding/Tendering [ID: 3530]

Level

BASIC

Background

A tender and a bid technically mean the same thing in the procurement context.

Procurement departments wish to buy something, so they package up the requirements and conditions into a document typically called an RFT, RFP or RFQ, depending on the nature of the procurement and the response they want.

- With an Request For Tender (RFT), the scope and specification are usually very clear and written by the Buyer.
- With an Request For Proposal (RFP), the Buyer is not clear on how the product will be supplied, so is seeking proposals from suppliers. So the specification is usually supplied by the Supplier.
- With an Request for Quotation (RFQ), they are buying a low risk/value item, and generally, all they are seeking is a price and a capability statement.

Notwithstanding that, all these documents are REQUESTS for tenders. The legal term is “ITT” (Invitation to Treat). In some jurisdictions this documents also called:

“ITT” (Invitation To Tender)
“IFB” (Invitation for Bids)

So the Suppliers submit a tender in response to the request. Their document package is called a “tender”, or, colloquially, a “bid”. This tender or bid comprises the Suppliers’ “Offer”.

If the Buyer accepts the Offer, and a price is agreed, then the ensuing suite of documents formalizing that arrangement is a legally binding contract.

Purpose

Tendering is the process of choosing the best or cheapest company to supply goods or do a job by inviting several companies to make offers. Tender document include many details including Tender Open Date, Minimum Participants, WTP (Willing To Pay), which is the maximum amount of price the company is willing to pay. The document also has a tender open date which is the day for winner announcement.

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Run the game
5. Taking role as one of the players and open up the player screen
6. Click to see the Wholesales offers that are currently active
7. Note that there are two types of offers. "Deal" and "Bid"
8. Here, we are concerned only with the "Bid"
9. Select one that gives the give you most favorable returns
10. Submit the bid by posting your bid price and wait for the tender opening date
11. Continue to monitor the Sales Order list to see if you have won the bid
12. If you do not win, or if the Tender is cancelled due to lack of participant, you need to repeat the tendering/bidding process
13. If you do win, the system has convert the bid into a Sales Order, you need to deliver the Sales Order according to the terms agreed
14. Observe:
• that all bids are not the same, some offer better margin than the others
• that if you bid has limited timing window, if you bid too late, you will be disqualified
• that if some other teams bid at a lower price than you, you will not get the deal

15. Further think about the followings:
• given that you may not know whether you will be the winner, how do you plan for the inventory?
• is it necessary to have the inventory before you participate in the tender/bid?
• which is better, participating in a tender/bid? or proceed to sign a direct deal without bidding?

Reset to Day 0 and repeat the process if necessary
MonsoonSIM B2B KPIs

1. Late Shipment to by Clients
2. Sales - B2B
3. Late B2B Shipment
4. by Warehouses - SalesB2B - by Finished Goods
MonsoonSIM Production Module

Background [Production Module]

The processes and methods used to transform tangible inputs (raw materials, semi-finished goods, subassemblies) and intangible inputs (ideas, information, knowledge) into goods or services.

Read more: http://www.businessdictionary.com/definition/production.html

In MonsoonSIM, Production is focused on the transformation of raw materials into finished goods. It is one of the core MonsoonSIM modules.

MonsoonSIM supports multiple levels of complexity. Learners are encouraged to start with the basic module, called Baseline model, and slowly progress to more advanced functionalities.

Here are some of what you will learn in the MonsoonSIM Production (Baseline):

- Concept of Bill of Materials (BOM)
- Concept of BOM Structures
- Concept of production machines
- Concept of asset depreciation
- Concept of production capacity

Note: There is no pre-requisite to learning the MonsoonSIM Baseline concepts

In MonsoonSIM, the Production module is related to the following department (modules):

- Finance (FIN)
- Procurement (PMN)
- Warehouse & Logistics (WHS)
- MRP (MRP)
- Maintenance (MNT)
- Human Capital Management (HCM)

Note: There is no pre-requisite to learning the MonsoonSIM Baseline concepts
Operating model [Production Module]

The following describes the operating model of MonsoonSIM Production module

[Baseline]

- Production requires machine(s)
- There are few types of production machine to choose from
- Each production machine comes with limited capacity
- Capacity is expressed in terms of Per Product Per Day
- Production will happen as soon as enough raw materials are available
- The components of raw materials required to make one product are defined in the Bill of Materials (BOM) structure
- Finished goods produced are automatically stored in the warehouse
- Production machines need to be maintained, otherwise, machine degradation will occur
- Machine degradation will result in lower production capacity
- Production machine will be depreciated based on straight line model
- Machine can also be disposed of
- When the machine is disposed of on, proper bookkeeping of the asset disposal can be explored in the Accounting
- The priority of products to be produced can be defined
- Staff Index affects the effectiveness of stock production. Hence, it is important to keep our staff index at 100% at all times.
- Players can analyze the sales performance and other useful intelligence by carefully examining the information from the Business Intelligence explorer
MonsoonSIM Production Micro Concepts

1. Concept Title : Bill of Materials (BOM) [ID: 3532]

Level
BASIC

Background
A bill of materials (BOM) is an extensive list of raw materials, components and assemblies required to construct, manufacture or repair a product or service. A bill of materials usually appears in a hierarchical format, with the highest level displaying the finished product and the bottom level showing individual components and materials.

For example, a computer is exploded into hard drives, computer chips, random access, memory panels and processors.

Purpose
To explain about the bill of materials (BoM), which is a list of the raw materials or components that are required to build an end product.

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. From the Information Menu, observe the Bill Of Material (BOM) structure for each of the product.
5. Run the game
6. Taking role as one of the players and open up the player screen
7. Buy 1 machine
8. Buy 60000 of each of the raw materials
9. When the raw materials arrive, observe
   - that production has started and the productions can be seen clearly from the Daily Production table
   - after about 5 days, observe how many of the raw materials remain and how many have been consumed
   - that in order the make 1 Juice, the machine will use up materials as defined in the BOM, which are:
     - 1 unit of fruit
     - 2 unit of straws
     - 1 unit of box
10. Further investigate:
    - how much warehouse space is used by the Raw materials and how much space is consumed by the Finished Goods?
    - how much space is used by the machines?

Reset to Day 0 and repeat the process if necessary
2. Concept Title : Production Capacity [ID: 3529]

Level

BASIC

Background

Production capacity can be defined as the maximum output that a business can produce in a given period with the available resources. It deals with output and how a manufacturer balances raw materials, machinery, labor and storage to match demand for its products. Decisions about production capacity can be strategic and operational, long- and short-term.

Capacity is usually measured in production units (e.g. 1,000 unit per month or 50,000 meals per day).

Production capacity can change for example when a machine is having maintenance, capacity is reduced. Capacity is also linked to workforce planning: e.g. by working more production shifts, capacity can be increased, or by adding more machine.

Purpose

Capacity in a production or process sense (Production Capacity) refers to the maximum amount of output that can be obtained through a certain machine or production line. Capacity can also be expressed in terms of an output rate of a certain number of units per unit of time.

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Run the game
5. Taking role as one of the players and open up the player screen
6. Invest in two (2) machines
7. Check your production capacity and know that it is a maximum of product you can produce in one day
8. Try to buy 60000 units of each of the raw materials
9. When the raw materials arrive, observe:
   - that Juices are being produced based on the Production Capacity of the machines
   - since each machine require a numer of staff, check that the staff count (under Finance) has increased based on the Machine type
10. Further considerations:
    - if Demand for both Retail and Wholesales can be predictable and assuming we are actively participating in wholeselling, how many machines will be needed to support a smooth supply of goods?

Reset to Day 0 and repeat the process if necessary
3. Concept Title : Batch Production Order [ID: 3558]

Level
BASIC

Background
Manufacturers of everything from cakes to clothing have many ways of organizing production to increase efficiency. One of these methods is called batch production, or batch processing.

In this approach, instead of manufacturing items individually or continuously, manufacturing moves in groups or batches. Each of the steps in the production process is applied at the same time to an entire batch of items, and that batch does not move onto the next stage of the production process until the whole batch is done.

Purpose
Batch production is the method used to produce or process any product in groups or batches where the products in the batch go through the whole production process together. Because a single production line can be used to produce several products, it is important that we can schedule which product will have priority

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Run the game
5. Taking role as one of the players and open up the player screen
6. Procure 1 Machine
7. Procure:
   - 20000 Apple
   - 20000 Orange
   - 40000 Straws
   - 20000 Boxes
8. When the materials arrive, watch:
   - that the # of Apple Juices are being produced is 20000
   - that the # of Orange Juices are being produced is zero
   - that the reason no Orange Juices are being produced because we run out of raw materials
   - that the only materials left in warehouse is 20000 unit of Oranges (not Orange Juice!)
9. Now set the Product Order so that the Orange Juice takes priority over other juices
10. Procure:
    - 20000 Apple
    - 80000 Straws
    - 40000 Boxes
11. Hence, when the materials arrive, we should have:
    - 20000 Apples
    - 20000 Oranges
    - 80000 Straws
    - 40000 Boxes
12. Now watch our production begins. Observe that:
    - that first batch of juices produced are Orange Juices, not Apple Juice
13. Things to ponder:
    - How will your prioritize your production if your machines need longer set up time when the production cuts over from Orange Juice to Apple Juice as supposed to the other way round?
    - What happen if your team members have participated in a lot of bids that involves Orange Juice as compared to other juices
4. Concept Title: Production Effectiveness [ID: 12057]

**Level**

BASIC

**Background**

To be able to compete with competitors, you have to continually strive to improve your performance by enhancing the production line’s effectiveness to meet the needs of an ever-changing market. Producing on your own may result in a lower COGS.

**Purpose**

To demonstrate how to Effectively use your machine for production

**Steps**

1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Run the game
5. Taking role as one of the players and open up the player screen Invest in two (2) machines
6. Check your production capacity and know that it is a maximum of product you can produce in one day
7. Try to set as 100% Production and the safety stock as 100000 units each in MRP, then run the MRP on the next day
8. When you’ve started to produce goods, observe:
   - that your machine capacity will slowly be dropping down
   - check the daily production graph and see that your production per day is decreasing
9. Reset to day 0
10. Repeat point 6 and 8
11. now go to HR and fire 3 people from the production department
12. When you've started to produce goods, observe:
   - Check your daily production graph, you should notice that the actual production will be lower than your production capacity
   - Check your headcount & competency index, you should notice that it is not 100%
   - After you hire 3 new people into production department with the correct competency (or give them training) you will notice that your production capacity vs actual production will match again
13. Further, observe:
   - Now you know what to do to keep your production effectiveness If you fail to manage those things, you will not be able to reach your time goal and target output.
   - You should do maintenance to keep your machine capacity.
   - You should find the balance on how many machines do you need and how much products do you need to produce every day.
   - Keeping too much machine without effectively using them will be a bad choice

Reset to Day 0 and repeat the process if necessary
MonsoonSIM Production KPIs

1. Return On Fixed Asset
2. Production
3. Utilization - Machine capacity
4. Utilization - Machine Capacity
5. Production
MonsoonSIM MRP Module

Background [MRP Module]

Material requirements planning (MRP) is a production planning, scheduling, and inventory control system used to manage manufacturing processes.

An MRP system is intended to simultaneously meet three objectives:

- Ensure materials are available for production and products are available for delivery to customers.
- Maintain the lowest possible material and product levels in store.
- Plan manufacturing activities, delivery schedules and purchasing activities.

Read more: [https://en.wikipedia.org/wiki/Material_requirements_planning](https://en.wikipedia.org/wiki/Material_requirements_planning)

In MonsoonSIM, MRP is one of the core modules. In this case, MRP is responsible for helping teams to:

- create purchase orders based on demands, ensuring enough materials and goods are available for delivery
- to maintain lowest possible materials and goods in warehouse

MonsoonSIM supports multiple levels of complexity. Learners are encouraged to start with the basic module, called Baseline model, and slowly progress to more advanced functionalities.

Here are what you will learn in the MonsoonSIM MRP (Baseline):

- Concept of Bill of Materials
- Concept of materials and goods requisition planning based on demands
- Concept of percentage of production vs outsourcing affecting the outcome of the MRP
- Concept of buffer stock or minimum stock level

In MonsoonSIM, the MRP module is related to the following department (modules):

- Production (PRD)
- Procurement (PMN)
- Human Resources Management (HCM)

Note: There is no pre-requisite to learning the MonsoonSIM Baseline concepts.
Operating model [MRP Module]

The following describes the operating model of MonsoonSIM MRP module

[Baseline]

- MRP will generate Purchase Requisitions (PR) based on the shortfall of the products or raw materials by calculating the current demand and the current supply.
- Demand is calculated based on:
  - Outgoing shipment to retail stores committed
  - Sales Orders committed
  - Buffer stock settings
- Supply is calculated based on:
  - Stock on hand
  - Raw materials on hand
  - Purchase Orders committed
  - Incoming shipment from retail stores
- The MRP will determine how many finished goods to purchase or how many raw materials to purchase depending on the setting of the percentage of stock to be produced vs outsourced
- Everytime MRP is executed, all pending Purchase Requisitions (unapproved PO) will be canceled
MonsoonSIM MRP Micro Concepts

1. Concept Title: Material Requirement Planning (MRP) for Trading Company [ID: 3534]

Level
BASIC

Background

Material requirements planning (MRP) is a production planning and inventory control system. An MRP integrates data from production schedules with that from inventory and to calculate purchasing and shipping schedules for the product.

There are three primary functions of an MRP system.

- First, the system helps ensure that the necessary products are available for customers to avoid shortages.
- Second, MRP reduces waste by maintaining only the lowest possible product levels in stock.
- Lastly, an MRP system helps plan manufacturing functions, delivery schedules, and purchasing.

Purpose

To demonstrate the Material requirements planning (MRP) which is a production planning and inventory control system. An MRP integrates data from production schedules with that from inventory and the bill of materials (BOM) to calculate purchasing and shipping schedules for the parts or components required to build a product.

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Run the game
5. Taking role as one of the players and open up the player screen
6. Set the MRP Production Split setting to 100% Outsource and 0% Produce. By doing so, you are running MRP for a Trading company (As supposed to a Manufacturing company)
7. Sign a B2B Deal to create a Sales Order (SO)
8. After the SO has been created, run MRP
9. Observe that the amount required to satisfy the SO is exactly the amount of Finished Goods specified in the Purchase Request MRP has created
10. From the above, you can see that MRP has actually helped you meet your demand
11. Now, create more complex scenario
12. Reset the game to day 0
13. Sign an B2B Deal and at the same time, create a Move request to move 5000 units of Apple Juices from warehouse to one of your retail stores
14. Wait for one day to let the transactions settled
15. Run MRP
16. Observe that the amount required to satisfy the SO as well as the Move Request are exactly the amount of Finished Goods specified in the Purchase Request MRP has created
17. All you need to do is to approve the PR to create the PO and you will soon have enough inventory to satisfy all our demands

Reset to Day 0 and repeat the process if necessary
2. Concept Title : Material Requirement Planning (MRP) for Manufacturing Company [ID: 3559]

Level

BASIC

Background

Material requirements planning (MRP) is a production planning and inventory control system. An MRP integrates data from production schedules with that from inventory and the bill of materials (BOM) to calculate purchasing and shipping schedules for the parts or components required to build a product.

There are three primary functions of an MRP system.

- First, the system helps ensure that the appropriate materials are available for production and the necessary products are available for customers to avoid shortages.
- Second, MRP reduces waste by maintaining only the lowest possible materials and product levels in stock.
- Lastly, an MRP system helps plan manufacturing functions, delivery schedules and purchasing.

Purpose

To demonstrate the Material requirement planning (MRP) which is a production planning and inventory control system. An MRP integrates data from production schedules with that from inventory and the bill of materials (BOM) to calculate purchasing and shipping schedules for the parts or components required to build a product.

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Note down your current Bill Of Materials (BOM) structure
5. Run the game
6. Taking role as one of the players and open up the player screen
7. Set the MRP Production Split setting to 0% Outsource and 100% Produce. By doing so, you are running MRP for a Manufacturing company (As supposed to a Trading company)
8. Sign a B2B Deal to create a Sales Order (SO)
9. After the SO has been created, run MRP
10. Observe that the amount of Raw Material required to satisfy the SO is exactly the amount of Raw Materials specified in the Purchase Request MRP has created
11. From the above, you can see that MRP has actually helped you meet your demand
12. Now, create more complex scenario
13. Reset the game to day 0
14. Sign an B2B Deal and at the same time, create a Move request to move 5000 units of Apple Juices from warehouse to one of your retail stores
15. Wait for one day to let the transactions settled
16. Run MRP
17. Observe that the amount required to satisfy the SO as well as the Move Request are exactly the amount of Raw Materials specified in the Purchase Request MRP has created
18. All you need to do is to approve the PR to create the PO and you will soon have enough inventory to satisfy all our demands
19. Purchase two machines, if you have not done so
20. Watch the machines produce the goods and see how the goods produced are automatically allocated for shipment
21. Watch that the SO is now marked “completed” and the money is already recorded in the Accounting
Reset to Day 0 and repeat the process if necessary
3. Concept Title: Safety Stock [ID: 3552]

Level

BASIC

Background

As a retailer, how do you avoid stock shortage? You risk losing out on sales and customer loyalty. So what can you do to guard against unexpected incidents and keep your customers happy?

The answer lies in safety stock. You’d want to have enough in it to help you fulfill the demand and not losing the opportunity to sell. So you should decide on how much safety stock to carry. But always remember that the more you stock, the higher your carrying costs become.

For example,

- You’re selling 100 total units over the past 10 days. That means our daily sales is 10 units per day.
- Your average delivery lead time for the last 10 days is 2 days lead time for the product to arrive.
- Since the average sales are 10 per days, you decided to have a 50 units safety stock so you could have 5 days worth of stock before you will restock your product.

Purpose

Safety stock term used by logisticians to describe a level of extra stock that is maintained to mitigate risk of stockouts (shortfall in raw material or packaging) due to uncertainties in supply and demand.

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Run the game
5. Taking role as one of the players and open up the player screen
6. Set the MRP Production Split setting to 100% Procure and 0% Produce. By doing so, you are running MRP for a Trading company.
7. Set the Safety stock level of Apple Juice to 20000 units
8. Run MRP
9. Observe that MRP has generated PR for 20000 units of Apple Juice Purchase Request, a value that matches the Safety stock level set above.
10. Proceed to approve the PR and turn it into a PO
11. Wait till the products arrive at the warehouse
12. Now, using Move Stock to ship 10000 units of Apple Juice to one of the retail stores
13. Now, run MRP again
14. Observe that MRP has generated PR for 10000 units of Apple Juice to ensure that your Safety stock level of Apple Juice is maintained at 20000 units.
15. From the above, you can see that MRP has actually helped you meet your demand - and - that the demand can come from shipment request away from warehouse, as well as B2B Sales Orders, as well as Safety Stock.
16. Investigate more complex scenarios where you have a combination of SO, Stock Moves, B2B order and incoming Purchase and observe how MRP help secure the supplies to meet your demands.

Reset to Day 0 and repeat the process if necessary.
4. Concept Title: Preferred Vendor (Sourcing) [ID: 3560]

Level
BASIC

Background

While there's no one-size-fits-all solution when it comes to choosing the right vendor, there are three general rules to follow and keep in mind:

- **Less Is More**: Whenever possible, consolidate your purchasing to as few vendors as possible. This sounds obvious, but you will need to take time and learn about all the vendors you're working with, and don't settle just because that's how things were done in the past.
- **Price Isn't Everything**: Unfortunately, great service isn't cheap, and if you use pricing as a determining factor for selecting your vendors, you'll often get what you pay for.
- **Remember for safety**: Take a look around your suppliers' capability to determine whether they take time factor seriously as you do. Look for any issues with their product.

Purpose

MRP can be set to select a preferred source/vendor. A manufacturer or seller that has a continuing arrangement with its preferred supplier. It is not uncommon for firms to re-evaluate their preferred vendor list every three to five years.

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Run the game
5. Taking role as one of the players and open up the player screen
6. Set the MRP Production Split setting to 100% Procure and 0% Produce. By doing so, you are running MRP for a Trading company
7. Set the Safety stock level of Apple Juice to 20000 units
8. Run MRP
9. Observe that MRP has generated Purchase Request (PR) for 20000 units of Apple Juice Purchase Request, a value that matches the Safety stock level set above
10. Note down the Vendor name in the PR
11. Do not approve the PR
12. Try running the MRP for a few times (What this does is that the MRP will invalidate the old un-approved PR and regenerate new PR). Each time, note the name of the Vendor
13. Observe that everytime the MRP will randomly select one of the two vendors
14. Now, set the Preferred Vendor to one of the two
15. Repeat running the MRP without approving the PR and watch if the Vendor is now matching the one you have selected as the Preferred one
16. Background knowledge
   - There are many reasons why we sometimes wish to set a preferred vendor. One of the reasons may be that this Vendor is more reliable in terms of its Lead Time compared to the other

Reset to Day 0 and repeat the process if necessary
MonsoonSIM MRP KPIs

There are no KPIs defined yet
MonsoonSIM Maintenance Module

Background [Maintenance Module]

The work of keeping something in proper condition, care or upkeep including taking steps to avoid something breaking down (preventative maintenance) and bringing something back to working order (corrective maintenance).

Read more: http://www.globalnegotiator.com/international-trade/dictionary/maintenance/

In MonsoonSIM, Maintenance is one of the core modules. In this case, the maintenance is about keeping the high valued asset, the production machines, in good working order.

MonsoonSIM supports multiple levels of complexity. Learners are encouraged to start with the basic module, called Baseline model, and slowly progress to more advanced functionalities.

Here are what you will learn in the MonsoonSIM Maintenance (Baseline):

- Concept of Preventive Maintenance
- Concept of Predictive Maintenance
- Concept of Work Order
- Concept of maintenance disruptions

In MonsoonSIM, the Maintenance module is related to the following department (modules):

- Finance (FIN)
- Purchasing (PMN)
- Production (PRD)
- Human Resources Management (HCM)

Note: There is no pre-requisite to learning the MonsoonSIM Baseline concept
Operating model [Maintenance Module]

The following describes the operating model of MonsoonSIM Maintenance module

[Baseline]

- Machine will degrade proportionally to usage
- Machine degradation will affect the production output
- A maintenance work is called a Work Order
- The state of the machine is characterized by a concept called OEE (Overall Equipment Efficiency). [link](https://www.automationworld.com/article/topics/oee/how-calculate-overall-equipment-effectiveness-practical-guide)
- OEE = Availability x Performance x Quality
- OEE of 100% indicates the machine is at its best state of health
- There are two types of maintenance
  - Periodic or sometimes referred to preventive maintenance
  - Predictive or sometimes referred to as conditional maintenance
- Characteristics of periodic maintenance
  - maintenance work will be performed at a fixed period, regardless of the state of health of the asset
  - each periodic work will cost a fixed amount of fee
  - each periodic maintenance will improve the health of the asset, thereby, improve the production output
- Characteristics of predictive maintenance
  - physical sensors must be installed onto the asset
  - the sensors are designed to detect the state of
    - machine Availability
    - machine Performance and
    - machine Quality
  - The three components (A,P,Q) makes up the overall OEE index.
  - sensors will send out the state of the asset in terms of color codes
    - Green - to indicate that the machine is performing optimally
    - Yellow - to indicate that the machine is not performing optimally
    - Orange - to indicate that there is degradation, requiring attention
    - Red - to indicate that the problems are severe and require immediate maintenance work to be performed
  - each Work Order will cost a fixed amount of fee
- Staff Index affects the effectiveness of maintenance work. Hence, it is important to keep our staff index at 100% at all times.
- Players can analyze the machine performance and other useful intelligence by carefully examining the information from the Business Intelligence menu.
MonsoonSIM Maintenance Micro Concepts

1. Concept Title : Asset Maintenance [ID: 3531]

Level
BASIC

Background

All assets usually require some level of maintenance service or repair such as routine mechanics for company vehicles or repainting an office or building. Scheduling and tracking this type of maintenance provides a complete picture of the true costs and revenues associated with these assets.

Keeping detailed records of maintenance events helps manage the physical aspects of your assets. You can compare repair estimates to actual costs and evaluate whether a maintenance contract on the asset can lower the costs that you may incur.

Analysing an asset maintenance history can help you make decisions.

Purpose

Asset Maintenance is a continuous process improvement strategy for improving the availability, quality, reliability, performance of physical assets. Failing to maintain expensive assets such as machines will result in loss of productivity and profit.

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Run the game
5. Taking role as one of the players and open up the player screen
6. Note down the existing machine capacity of each of the machine
7. Also take note that we have turned on Maintenance Module, which means that the machine will start requiring maintenance upon usage
8. Purchase two (2) machines
9. Buy 60000 units of each of the Raw Materials
10. When the raw materials arrive, observe that the production start immediately according to the BOM structure of the product
11. After the productions stop (within a few days), note down the current machine capacity of each of the machine
12. Observe that the capacity of one of the working machine has dropped somewhat. This is due to normal wear and tear of the machine. You can easily see the output from your Daily Production report.
13. At this point, it is imperative that we start to maintain the machine. Otherwise, the machine will degrade very drastically. We will cover the different types of maintenance features in our next micro learning topics
14. You can also reconfirm that the Overall Equipment Efficiency (OEE) of the machine has degraded by observing the Maintenance - Asset Summary menu

Reset to Day 0 and repeat the process if necessary
2. Concept Title : Periodic Maintenance [ID: 3510]

Level

BASIC

Background

Periodic maintenance is a variety of different activities that are carried out to ensure the smooth operation of a machine, equipment, system or plant and is performed on a regular, preset schedule.

Conducting periodic maintenance will ensure its performance capabilities and life of your asset.

Purpose

Periodic Maintenance is also called Scheduled Maintenance. It is the activities carried out regularly to maintain the condition or operational status of a building, equipment, machine, plant, or system. The works are usually carried out irregardless of the state of the condition of the asset.

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Run the game
5. Taking role as one of the players and open up the player screen
6. Buy 1 machine
7. Note down the current machine capacity, they should be 10000 unit/day per new machine
8. Buy a big amount of Raw Materials and let's get productions going. (Suggest to buy 80000 of each of the raw materials)
9. When the materials arrive, watch the machines work on the materials and convert them into Finished Goods.
10. From your KPI box, watch the slow drop in the machine capacity
11. Now, go to maintenance and create new Work Order
12. Select Periodic Maintenance for the machine that you wish to maintain
13. Set a period of every 5 days, observe that the machine capacity eventually comes back up to normal
14. Further explorations:
   - Did you notice that the machine will always produce less on the day there is a scheduled (periodic) maintenance?
   - Consider the demand forecasts, the number of machines, and the disruption the maintenance will have towards the machine output on the day of maintenance, what is the ideal frequency for the work order? 9 days? 7 days?

Reset to Day 0 and repeat the process if necessary.
3. Concept Title : Predictive Maintenance [ID: 3535]

Level
BASIC

Background
Predictive maintenance designed to help determine the condition of an equipment in order to predict when maintenance should be performed. This approach promises cost savings over routine or time-based preventive maintenance because tasks are performed only when problem occur.

The main purpose of predictive maintenance is to allow convenient scheduling of corrective maintenance and to prevent unexpected equipment failures. The key is "the right information at the right time". By knowing which equipment needs maintenance, maintenance work can be better planned and what would have been "unplanned stops" are transformed to shorter and fewer "planned stops", thus increasing plant availability.

Purpose
To help determine the condition of in-service equipment in order to predict when maintenance should be performed. This approach promises cost savings over scheduled or periodic maintenance

Steps
1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Run the game
5. Taking role as one of the players and open up the player screen
6. Buy 1 machine
7. Invest in machine sensors. The machine sensors will enable you to monitor the status of the machine, namely:
   - machine Availability
   - machine Performance and
   - machine Quality
8. Note down the current machine capacity, they should be 10000 unit/day per new machine
9. Also Note that the sensors of the machine have shown up in your KPI box, showing you the current status of the machine. The color codes are :
   - Green - to indicate that the machine is performing optimally
   - Yellow - to indicate that the machine is not performing optimally
   - Orange - to indicate that there is degradation, requiring attention
   - Red - to indicate that the problems are severe and require immediate maintenance work to be performed
   - each Work Order will cost a fixed amount of fee
10. Now, buy a big amount of Raw Materials and let's get productions going. (Suggest to buy 120000 of each of the raw materials)
11. When the materials arrive, watch the machines work on the materials and convert them into Finished Goods.
12. From your KPI box, watch the slow drop in machine capacity as the machine start to wear down
13. Continuously monitor the color codes posted by the sensors
14. Observe that the color will go from Green to Yellow, indicating that the performance has degraded
15. Now, go to maintenance and create new Work Order
16. With the color code clearly indicating which part of the machine is in-need of service, you can proceed to set Work Order only on that particular part of the machine
17. In summary:
   - Predictive Maintenance allows one to have more control about what part of the machine to repair rather than a blindly scheduled Periodic or Scheduled Maintenance. By having a more targeted
approach - fix only what is broken - the maintenance fee is usually lower in the long run.

Reset to Day 0 and repeat the process if necessary
4. Concept Title: Overall Equipment Efficiency [ID: 3536]

Level

BASIC

Background

OEE (Overall Equipment Effectiveness) is the gold standard for measuring manufacturing productivity. Simply put, it identifies the percentage of manufacturing time that is truly productive. An OEE score of 100% means you are manufacturing only Good Parts, as fast as possible, with no Stop Time. In the language of OEE that means 100% Quality (only Good Parts), 100% Performance (as fast as possible), and 100% Availability (no Stop Time).

Purpose

To demonstrate the Overall Equipment Efficiency (OEE) of the machines degrades over time and how Predictive or Periodic Maintenance are needed to maintain the machine's OEE

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Run the game
5. Taking role as one of the players and open up the player screen
6. Purchase two machines
7. When the machine arrives, note the OEEs of the machines are 100%
8. Watch your KPI box and also observe that the production capacity of the machines are 10000 each
9. Now procure 60000 unit of each of the Raw Materials
10. When the materials arrive, observe that the production process starts automatically
11. As the production continues, go to Production-Machine menu and watch the current OEE of the machines
12. Observe that the OEE of the machines have dropped
13. The rate of degradation of the machine depends on the number of units produced by the machine
14. Notice that the capacity of the Machine are now no longer 10000 unit as the OEE falls
15. Further observe:
   - that if you trigger maintenance on the machine (read more about the type of available Maintenance program), you will increase the OEE of the machine and regain your production capacity

Reset to Day 0 and repeat the process if necessary
5. Concept Title: Fixed Asset Disposal [ID: 3562]

Level

BASIC

Background

There are two scenarios under which you may dispose of a fixed asset. The first situation arises when you are eliminating a fixed asset without receiving any payment in return. This is a common situation when a fixed asset is being scrapped or given away because it is obsolete or no longer in use, and there is no resale market for it.

When you sell an asset, so that you receive cash in exchange for the fixed asset you are selling. Depending upon the price paid and the remaining amount of depreciation that has not yet been charged to expense, this can result in either a gain or a loss on sale of the asset.

Purpose

When a fixed asset or plant asset is sold, the asset's depreciation expense must be recorded up to the date of the sale. Next, 1) the asset's cost and accumulated depreciation is removed, 2) the amount received is recorded, and 3) any difference is reported as a gain or loss.

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Run the game
5. Taking role as one of the players and open up the player screen
6. Buy 1 machine
7. After the machines have been recorded, continue to run the game for about 5 days
8. Stop the game
9. Open up your Accounting and observe:
   - That your Asset have been depreciated in your Balance Sheet
   - That your Depreciation charges have been properly recorded into your Profit and Loss statement
10. Open up your Production - Machine menu
11. Observe the book value of the current Assets
12. Run the Game
13. Click to dispose this machine
14. After one day stop the Game
15. Observe how the disposals of this machine have been properly recorded in your Accounting
16. Your Asset value in Balance Sheet is now 0
17. Click on the detail to observe that your original machine of 300000 is now being offset by Cash Increase of your disposal value + Other Income / Loss + Asset Depreciation
18. Your Depreciation value is now reversed, now, there is 0 in Asset Depreciation
19. In summary:
   - The overall concept for the accounting for asset disposals is to reverse both the recorded cost of the fixed asset and the corresponding amount of accumulated depreciation. Any remaining difference between the two is recognized as either a gain or a loss.

Reset to Day 0 and repeat the process if necessary
MonsoonSIM Maintenance KPIs

There are no KPIs defined yet
MonsoonSIM HR Module

Background [Human Capital Management Module]

Human capital management (HCM) is a set of practices related to people resource management. These practices are focused on the organizational need to provide specific competencies and are implemented in three categories: workforce acquisition, workforce management, and workforce optimization.

Read more: http://www.gartner.com/it-glossary/hcm-human-capital-management

In MonsoonSIM, Human Capital Management or Human Resource management is one of the core modules.

MonsoonSIM supports multiple levels of complexity. Learners are encouraged to start with the basic module, called Baseline model, and slowly progress to more advanced functionalities.

Here are what you will learn in the MonsoonSIM Human Capital Management (Baseline):

- Concept of employee competency
- Concept of employee training
- Concept of employee headcount (planned, actual, shortfall)
- Concept of employee cost
- Concept of recruitment
- Concept of employee counseling
- Concept of employee personnel records
- Concept of employee transfer
- Concept of employee resignation
- Concept of employee issues
- The concept of staff index, which consists of:
  - Staff headcount index
  - Staff competency index

Here are some of what you will learn in the MonsoonSIM Finance (Advanced):

- Concept of personality assessment
- Concept of Big Five (O.C.E.A.N) personality factors
  - O - Openness
    - This trait features characteristics such as imagination and insight, and those high in this trait also tend to have a broad range of interests. People who are high in this trait tend to be more adventurous and creative. People low in this trait are often much more traditional and may struggle with abstract thinking.
    - People who are high on the openness continuum are typically:
      - Very creative
      - Open to trying new things
      - Focused on tackling new challenges
      - Happy to think about abstract concepts
  - C - Conscientiousness
    - Standard features of this dimension include high levels of thoughtfulness, with good impulse control and goal-directed behaviors. Highly conscientiousness tends to be organized and mindful of details.
    - Those who are high on the conscientiousness continuum also tend to:
      - Spend time preparing
      - Finish important tasks right away
      - Pay attention to details
      - Enjoy having a set schedule
  - E - Extraversion
    - Extraversion is characterized by excitability, sociability, talkativeness, assertiveness, and high amounts of emotional expressiveness.
    - People who are high in extraversion are outgoing and tend:
      - Enjoy being the center of attention
Like to start conversations
Enjoy meeting new people
Have a wide social circle of friends and acquaintances
Find it easy to make new friends
Feel energized when they are around other people
Say things before they think about them

- **A - Agreeableness**
  - This personality dimension includes attributes such as trust, altruism, kindness, affection, and other prosocial behaviors. People who are high in agreeableness tend to be more cooperative while those low in this trait tend to be more competitive and even manipulative.
  - People who are **high** in the trait of agreeableness tend to:
    - Have a great deal of interest in other people
    - Care about others
    - Feel empathy and concern for other people
    - Enjoy helping and contributing to the happiness of other people

- **N - Neuroticism**
  - Neuroticism is a trait characterized by sadness, moodiness, and emotional instability. Individuals who are high in this trait tend to experience mood swings, anxiety, irritability, and sadness. Those low in this trait tend to be more stable and emotionally resilient.
  - Individuals who are **high** in neuroticism tend to:
    - Experience a lot of stress
    - Worry about many different things
    - Get upset easily
    - Experience dramatic shifts in mood
    - Feel anxious

- Impact on OCEAN factors that affects employee issues
- Impact on employee competencies on customer satisfaction

Source: [https://www.verywell.com/the-big-five-personality-dimensions-2795422](https://www.verywell.com/the-big-five-personality-dimensions-2795422)

In MonsoonSIM, the Human Capital Management module is related to the following department (modules)

- Finance (FIN)
- Retail (RTL)
- Marketing (MKT)
- Forecasting (FCS)
- Procurement (PMN)
- Warehouse and Logistic (WHS)
- B2B (B2B)
- Production (PRD)
- MRP (MRP)
- Maintenance (MNT)
- Service Management (SRV)

Note: There is no pre-requisite to learning the MonsoonSIM Baseline concept
Operating model [Human Capital Management Module]

The following describes the operating model of MonsoonSIM Human Capital Management module

[Baseline]

- HR is important to any business
- HR is the concept of having the right employee working at the right place at the right time
- The Right employee does not only refer to having the right competency, but also the right personalities
- There is one major concept here in HR:
  - Staff Index, which is a multiplication of
    - Competency Index and
    - Headcount Index
- Staff Index = Headcount Index * Competency Index.
  - For example B2B has planned of 4 Staff all with 100% competency in B2B. Unfortunately, 1 has just resigned and only 3 staff remain. The Headcount index is now 3/4 = 0.75, and the Competency index is also 0.75. So the overall Staff Index for B2B = 0.75 * 0.75 = 0.56.
  - Suppose B2B department just hired a new staff but with 0 competencies in B2B knowledge. Then, the Headcount index is now 4/4 = 1, but the Competency index remains at 0.75 (since the new hire has 0 competencies). So the overall Staff Index of B2B now = 1 * 0.75 = 0.75.
- Staff Index affects the effectiveness of their work. Hence, it is important to keep our staff index at 100% at all times.
- Department with inadequate staff Index will result in complaints from either vendors, customers or co-workers.
- Employee Turnover Ratio = ( Employees who left/ Average active staff per day )
  - For example:

<table>
<thead>
<tr>
<th>Day</th>
<th>Active Staff</th>
<th>Resigned</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>

  - The Average active staff for 3 days is (6+6+4):3 = 5.33
  - The Employee Turnover Ratio is now 2/5.33 = 0.375
  - based on https://resources.workable.com/tutorial/calculate-employee-turnover-rate
- Complaints will result in negative consequences for the company:
  - For Vendor, you will likely to pay higher price for your next purchase
  - For Client, you will likely to get less invitation for Bidding and Service RFQ
  - For Co-worker, you will likely to get more stress, which may lead to issues and resignations
- Handling of complaints will always be better than ignoring complaints
- Because competency is a big part of staff index, during recruitment, teams should pay attention to the competency profile of the candidate
- Competency can be improved either through formal or informal training on the job
- Staff has basic standard salary cost, which will increase very slowly as the day progresses
- Every day, new virtual staff will enter the job market
- Staff may develop work issues and eventually resign if they are counseled.
- Counselling will reduce the chance of a staff resigning, but this is not guaranteed.
- Resigned staff will cause the Headcount index to drop. (see above)
- Players can analyze the HCM performance and other useful intelligence by carefully examining the information from the Business Intelligence explorer

[Advanced]

- Every department (position) needs staff with specific kind of personality, such requirement of the department is expressed in terms of the OCEAN factors, which can be visible to the teams. While staff competency can be improved via on the job training or third party training, human personalities are generally considered "fixed".
- Teams can find out staff personal by performing a personality test
- Personality mismatch between a Job and a Position can be very stressful
- Knowing the personality of the staff, sometimes, it is better to transfer the employee to the department that matches the employee's personality
• Under stress, person with high Neuroticism score are more likely to develop work issue and eventually resign
• Sometimes, it is better to "keep" employee than to hire new ones. However, in some cases, it is better to let certain employees resign to give way to new hires
• Department with inadequate overall competency and headcount will result in complaints
MonsoonSIM HR Micro Concepts

1. Concept Title: Planned, Actual, Shortfall [ID: 3541]

Level
BASIC

Background
Headcount planning and management across a team or an organization is a complex process. In a changing environment, current and forecasted headcount should be revisited regularly in light of many factors, including changes in strategy, level and type of workload, the changing workforce landscape, and goals & growth plans for individual team members.

Planned headcount, is the number of the ideal employee you should have in a certain department to keep their function work properly

Actual headcount, is the actual employee currently working in your department

Shortfall, is the difference between planned headcount vs actual headcount

Purpose
To demonstrate the concept of planned headcount, actual headcount and the headcount shortfall

Steps
1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Configure:
   › HCM - Rate of staff having issues. Set it to “Fast”
5. Run the game
6. Taking role as one of the players and open up the player screen
7. Let the game run for about 10 days
8. Click on HR - Headcount by Department
9. Observe which are the departments that are experiencing headcount shortfall
10. Observe that because of headcount shortfall, the Competency Index also drops as a result, not just the Headcount Index
11. Observe that the Staff Index is the multiply effect of having Headcount Index and Competency Index
12. Observe that the overall Staff Index and each individual Department Staff Index is shown in the KPI box
13. For further investigation
   › What are the impact of Staff Index on the performance of the department?

Reset to Day 0 and repeat the process if necessary
2. Concept Title: Employee Counselling [ID: 3537]

Level

BASIC

Background

Employee counselling is an employee support intervention that is usually short term in nature and provides an independent. Its aim is to assist both the employer and employee by intervening with an active problem-solving approach to tackling the problems at hand.

Purpose

To expose the learners about one of the key aspects of the Human Capital Management -- Employee Counselling

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Configure:
   - HCM - Rate of staff having issues. Set it to "Fast"
5. Run the game
6. Taking role as one of the players and open up the player screen
7. Let the game run for about 10 days
8. Click on Headcount by Department
9. Observe which department has staff that are currently having "issues"
10. Open up the list of staff for that department
11. Find the staff that are having issues and quickly provide some HR counselling
12. After counselling, observe if the same staff are still having issues
13. Quite often, after counselling, the issue will go away
14. Further observe that if the staff are not provided counselling, often, the issue will escalate and eventually, the staff will resign

Reset to Day 0 and repeat the process if necessary
3. Concept Title : Employee Recruitment [ID: 3538]

Level
BASIC

Background
Recruitment refers to the overall process of attracting, selecting and appointing suitable candidates for jobs (either permanent or temporary) within an organization.

There are various recruitment approaches, such as relying on in-house personnel, outsourcing, employment agencies, executive search firms, social media, and recruitment services on the Internet.

- **In-house personnel** may manage the recruitment process. At larger companies, human resources professionals may be in charge of the task. In the smallest organizations, recruitment may be left to line managers.
- **Outsourcing of recruitment to an external provider** may be the solution for some businesses. Employment agencies are also used to recruit talent. They maintain a pool of potential employees and place them based on the requirements of the employer.

Purpose
To demonstrate how to select and recruit an employee for your company

Steps
1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Configure:
   - HCM - Rate of staff having issues. Set it to "Fast"
5. Run the game
6. Taking role as one of the players and open up the player screen
7. Let the game run for about 10 days
8. Click on Headcount by Department
9. Observe which department that has staff shortfall and note the department's:
   1. Headcount Index
   2. Competency Index
   3. Staff Index
10. Click Hire New Staff
11. Observe that the list contains candidates that have various skill background
12. Try to hire one that has some skill competency that is suitable to the department you are hiring for. Note that having someone with the right competency reduces the need for training and your department Competency Index can be raised as soon as they come on board
13. Note that the same candidates also available for other teams to recruit. Hence, you need to make quick decision if you see a right candidate
14. After the new staff has been recruited, observe that all your Indexes (Headcount Index, Competency Index and Staff Index) have and should all improved.
15. If you Competency Index has not improved, it may be because of the candidate does not have the right competency to work in this department

Reset to Day 0 and repeat the process if necessary
4. Concept Title : Employee Transfer [ID: 3564]

Level

BASIC

Background

A transfer occurs when a certain employee is appointed to the same or similar position in another department. Most transfers will occur as a result of a job posting.

Employee transfers may be classified as below.

- **Production transfers**: Such transfers are made to meet the company requirements. The surplus employees in one department/section who are efficient might be absorbed in other place where there is a requirement. Such transfers help to stabilize employment.
- **Replacement transfers**: This takes place to replace a new employee who has been in the organization for a long time and thereby giving some relief to an old employee from the heavy pressure of work.
- **Versatility transfers**: It is also known as rotation. It is made to develop all round employees by moving them from one job to another. It also helps to reduce boredom and monotony.
- **Personnel or remedial transfers**: Such a transfer is made to rectify mistakes in selection and placement. As a follow up, the wrongly placed employee is transferred to a more suitable job.

Purpose

To demonstrate how to transfer employee to other department

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Run the game
5. Taking role as one of the players and open up the player screen
6. Click on Headcount by Department
7. Click on any of the staff and do a Transfer
8. After transfer, observe that the staff has finally moved from one department to another
9. Observe the changes in the Headcount Index, Competency Index and Staff Index for those department
10. Notice that even though if you have more Actual staff than Planned staff, the Index will never exceed 100%
11. Also notice that if your Actual staff headcount is more than your Planned headcount, your Shortfall would become Negative (-), which indicates that you have surplus staff in that department
12. If you turn on OCEAN Factors, you might need to use this feature more often

Reset to Day 0 and repeat the process if necessary
5. Concept Title : Employee Training [ID: 3539]

Level

BASIC

Background

Training is a program that helps employees learn specific knowledge or skills to improve performance in their current roles.

Good training and development programs help you keep the right people and grow profit. As the battle for top talent becomes more competitive, employee training and development programs are more important than ever. Hiring top talent takes time and money, and how you engage and develop that talent impacts retention and business growth.

Purpose

To demonstrate how to increase company's Staff Competency Index through training

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Configure:
   - HCM - Rate of staff having issues. Set it to "Fast"
5. Run the game
6. Taking role as one of the players and open up the player screen
7. Let the game run for about 10 days
8. Click on Headcount by Department
9. Observe which department that has staff shortfall and note the department's:
   1. Headcount Index
   2. Competency Index
   3. Staff Index
10. Click Hire New Staff
11. Observe that the list contains candidates that have various skill background
12. Hire someone with no matching competency. Note that the right competency is needed in order to maintain your company's Competency Index.
13. Note that even though your Headcount Index has improved after hiring this new staff, you still need to bring up his competency by sending the staff to Training
14. After this staff has completed his training, observe that all your Indexes (Headcount Index, Competency Index and Staff Index) have and should all improved

Reset to Day 0 and repeat the process if necessary
6. Concept Title : Payroll [ID: 3540]

Level

BASIC

Background

Payroll is the sum total of all compensation a business must pay to its employees for a set period of time or on a given date. It is usually managed by the accounting department of a business.

Payroll can differ from one pay period to another due to overtime, sick pay and other variables.

Purpose

To demonstrate how payroll is calculated and how the transaction is being posted in Accounting

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Taking role as one of the players and open up the player screen
5. Click on Headcount by Department
6. Check out your total current headcount
7. Multiply the headcount by the salary per staff (can be found in your configuration under the HCM module)
8. Observe the booking of Salary transaction in your Accounting. Note that the transaction should be posted in the Operating Expense section

Reset to Day 0 and repeat the process if necessary
7. Concept Title: Headcount Index [ID: 12054]

Level

BASIC

Background

The Headcount index is the proportion of a population exists in your company. You will need an ideal amount of headcount for your company to be able to perform effectively.

Purpose

To demonstrate the importance of headcount index

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Configure:
   - SRV - Rate of customer complaint. Set it to "Fast"
5. Run the game
6. Let's reduce the headcount index etency of several departments so we will draw some complaints from our client. One way to draw complaint is to dismiss some of our staff. Let's fire 2 staff from one of our Retail stores, Finance, Procurement, and B2B
7. Once the staff have been dismissed, let the game run
8. You should observe that there will be complaints coming into your inbox
9. To handle the complaint, all you need to do is to handle it.
10. Further investigate that if the headcount index also affect staff index, and a low headcount index will affect overall department activities and effectiveness
11. Complaints will result in negative consequences for the company:
    - For Vendor, you will likely to pay higher price for your next purchase
    - For Client, you will likely to get less invitation for Bidding and Service RFQ
    - For Co-worker, you will likely to get more stress, which may lead to issues and resignations

Reset to Day 0 and repeat the process if necessary
8. Concept Title : Staff Index [ID: 12055]

Level

BASIC

Background

Staff Index affects the effectiveness of employee's work. Department with inadequate staff Index will result in complaints from either vendors, customers or co-workers. Hence, it is important to keep our staff index at 100% at all times.

Purpose

To demonstrate the importance of staff index

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Configure:
   - SRV - Rate of customer complaint. Set it to "Fast"
5. Run the game
6. Let's reduce the staff index of several departments so we will draw some complaints from our client. One way to draw complaint is to dismiss some of our staff. Let's fire 3 staff from one of our Retail stores, Procurement, and B2B
7. Once the staff have been dismissed, let the game run
8. You should observe that there will be complaints coming into your inbox
9. You can take a look at your B2B offer, you will see less offer than other teams that have a higher staff index
10. Check out the sales of your retail store with low staff index bs the sales of a retail store with high staff index
11. If your Procurement staff have dropped into 0, you won't be able to do any purchase transaction
12. Further investigate that:
   1. The headcount index also affect staff index, and a low headcount index will affect overall department activities and effectiveness
   2. Staff Index = Headcount Index * Competency Index.
      - For example, B2B has planned of 4 Staff all with 100% competency in B2B. Unfortunately, 1 has just resigned and only 3 staff remain. The Headcount index is now 3/4 = 0.75, and the Competency index is also 0.75. So the overall Staff Index for B2B = 0.75 * 0.75 = 0.56.
      - Suppose B2B department just hired a new staff but with 0 competencies in B2B knowledge. Then, the Headcount index is now 4/4 = 1, but the Competency index remains at 0.75 (since the new hire has 0 competencies). So the overall Staff Index of B2B now = 1 * 0.75 = 0.75.
   3. Staff Index affects the effectiveness of their work. Hence, it is important to keep our staff index at 100% at all times.
   4. Department with inadequate staff Index will result in complaints from either vendor, customers or co-workers.
   5. Complaints will result in negative consequences for the company:
      - For Vendor, you will likely to pay a higher price for your next purchase
      - For Client, you will likely to get less invitation for Bidding and Service RFQ
      - For Co-worker, you will likely to get more stress, which may lead to issues and resignations
Reset to Day 0 and repeat the process if necessary
9. Concept Title : Employee Turnover Ratio [ID: 12056]

Level
BASIC

Background
While turnover rates vary by industry, high turnover usually suggests a problem with employee engagement. Engaged employees are generally happier, perform better, and stay with a company longer than disengaged employees. In addition to keeping a close watch on employee engagement, you need to pay attention to where the turnover is highest in your business.

High turnover could indicate an issue with the employee management. If your company is consistently losing top performers, it may be a sign of a larger problem within your organization. Employees can become disengaged when they are not managed effectively.

Purpose
To demonstrate the importance of employee turnover ratio

Steps
1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Run the game
5. Let's reduce the staff index of several departments so we will draw some complaints from our client. One way to draw complaint is to dismiss some of our staff. Let's fire 2 staff from one of our Retail stores, Procurement, and B2B
6. Once the staff have been dismissed, let the game run
7. You should observe that the turn over ratio will now go up
8. A high employee turnover ratio may be an indicator that things aren't great in a workplace. Not to mention, replacing workers is expensive to boot.
9. When you have a high turnover is the quickest way to learn what needs fixing and what changes need to be made, is to hire some new fresh talent to keep your company's activities on track.
10. Further investigate that:
   1. A high rate of employee turnover may cause additional costs to the company. An employee resignation will make you lost time and money to do some activities like hiring new people, personality assessment, training, etc.
   2. When an employee leaves a business, productivity may suffer during the time before the company hires a replacement.
   3. A high turnover may also affect the morale of the remaining employees. They may feel burdened with the extra work, resulting in stress among the remaining staff. This might cause an internal issue or lead to resignation.

Reset to Day 0 and repeat the process if necessary
MonsoonSIM HR KPIs

1. Headcount Idx - Overall
2. Competency Idx - Overall
3. Staff Resigned
4. Complaint by co-worker
5. Employee Turnover Ratio
MonsoonSIM Service Module

Background [Service Management Module]

Customer service is the provision of service to customers before, during and after a purchase.


In MonsoonSIM, the Service Management is about handling complaints and also providing value-added, billable services to customers.

MonsoonSIM supports multiple levels of complexity. Learners are encouraged to start with the basic module, called the Baseline model, and slowly progress to more advanced functionalities.

Here are what you will learn in the MonsoonSIM Service Management (Baseline):

- Concept of RFQ (Request for Quotation)
- Concept of bidding associated with RFQ
- Concept of man-power scheduling
- Concept of recruitment
- Concept of competency matching
- Concept of complaints
  - from clients
  - from vendors
  - from co-workers
- Concept of the effects on business due to poor relationships
  - with clients
  - with vendors
  - with co-workers
- Concept of on-the-job training
- Concept of terms of payments

In MonsoonSIM, the Service Management module is related to the following department (modules):

- Finance (FIN)
- Retail (RTL)
- Marketing (MKT)
- Forecasting (FCS)
- Procurement (PMN)
- Warehouse and Logistics (WHS)
- B2B (B2B)
- Production (PRD)
- MRP (MRP)
- Maintenance (MNT)
- Human Capital Management (HCM)

Note: There is no pre-requisite to learning the MonsoonSIM Baseline concept.
Operating model [Service Management Module]

The following describes the operating model of the MonsoonSIM Service Management module

[Baseline]

- There exists a number of clients
- Service Income
  - The clients will seek our services in the form of RFQ (Request for Quotation)
  - The RFQ will contain a number of specifications:
    - The services mandays needed
    - The maximum price the client is willing to pay
    - The delivery date expected
    - The quotation results announcement day
    - The penalty for late delivery
  - The RFQ is a form of bidding, in which all teams' quotations will be compared by the client
  - The client will compare based on price offered - the lower the better.
  - Quotation with service resources (staff) of mismatched skillset will be declined
  - On the bid announcement day, the client will announce the winning bidder and award the winner a new Sales Order (SO)
  - The SO cannot be canceled or modified
  - The losing bidders will see that their RFQ marked as "canceled"
  - The winning team must immediately schedule the mandays as per the RFQ
  - Those resources of the winning bid will be marked "blocked" on their calendar and therefore cannot be scheduled for other jobs
  - Payment will be made by the client as soon as the job is completed
  - In the event the resource (staff) assigned to a job resigns before all the promised mandays are delivered, then the service work cannot be performed. The client shall wait for twelve (15) days for the company to fulfill the delivery. Failing to do so will render the SO "canceled" with no payment obligated by the client
- Players can analyze the Services Management performance and other useful intelligence by carefully examining the information from the Business Intelligence explorer

- Complaints
  - Clients / Vendors / Co-workers may complain about someone in our department when that department's staff index has dropped below 100%
  - To know more about Staff Index, please visit the Operating Model of the Human Capital Management
  - Complaints should be dealt with by Service department as soon as possible
  - All complaints, regardless of being dealt with or not, will be recorded by the systems
  - Complaints that are not dealt with will result in more severe consequences than those that are dealt with
  - Consequences are:
    - Vendors may increase their selling price
    - Clients may request less of our goods and services
    - Co-workers may have higher work dissatisfaction - which may lead to issues and eventual resignation (see HR model)

- Multiple bookings
  - It is possible to have multiple bookings. This can happen in MonsoonSIM much like in real life.
  - Learners will experience delivery problems if there is a situation where a resource is being assigned to multiple jobs at the same time
  - e.g:

    On RFQ#123
    Team A propose John Doe & Peter Wu on day 8,9,10
    After that, Team A also dispatch the same person for RFQ#321 on day 9,10,11
    And now, one of the above quotes, if awarded, will not be fulfilled due to unavailable of resource A for day 20. Eventually, this bid will be canceled by the customer and no payment will be made.
MonsoonSIM Service Micro Concepts

1. Concept Title : Managing Customer Complaint [ID: 3542]

Level
BASIC

Background
Managing customer complaints is a vital, internal process influencing customer perceptions and the attitudes of your staff. Pay attention to complaints and you can improve customer satisfaction for the better.

Well-managed complaints can benefit your business. Good business owners learn to see complaints as an opportunity to build strong, lasting relationships with customers and improve their customer service. Customer complaints give businesses valuable information about how they need to improve.

Purpose
To demonstrate the handling of customer service and why ignoring customer complaints is not good for business

Steps
1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Configure:
   a. SRV - Rate of customer complaint. Set it to "Fast"
5. Run the game
6. Let's reduce the competency of one of our departments so we will draw some complaints from our client. One way to draw complaint is to dismiss some of our staff. Let's fire 2 staff from one of our Retail stores
7. Once the staff have been dismissed, let the game run for 10 days
8. You should observe that there will be complaints coming from Clients
9. To handle the complaint, all you need to do is to handle it.
10. Further investigate that if we ignore the customer's complaint, after a while, you will receive less B2B offers from that Client. You can observe this by taking on the role of players from two different teams. For the teams that always handle the customer complaints, the incoming B2B offers are not affected. For the teams that always ignore the customer complaints, the incoming B2B offers will become less over time

Reset to Day 0 and repeat the process if necessary
2. Concept Title: Manpower Scheduling [ID: 3543]

Level

BASIC

Background

Manpower scheduling is a process of constructing a shift schedule and allocating manpower to the shift schedule, such that customer demands are satisfied. Efficient scheduling decision is crucial as allocating manpower excessively results in excess labour cost, while allocating less manpower than required results in lost sales, dissatisfied customers, or overstretched manpower.

Purpose

To demonstrate how to schedule a work order for an incoming service request

Steps

1. Load this recommended configuration
2. Turn on the recommended modules
3. Initialize Game to Day 0
4. Configure:
   - SRV - Demand for Services. Set it to “High”
5. Run the game
6. Wait for the incoming service orders
7. Click to agree to take an order by scheduling your manpower for the job
8. Based on the number of mandays, click on the box of the staff who are available for the day
9. Note that the total number of boxes clicked must be the same as the requested manday
10. Note that you cannot schedule for day beyond the Expected Completed Day
11. Note that if you are on day X, you cannot schedule any days passed day X, so there is a window of time when you can make proper scheduling and submit
12. Once submitted successfully, the staff boxes are now marked “x” (busy) and you cannot schedule them for other work
13. After the completion date, observe the Service income you have just earned in your Accounting

Reset to Day 0 and repeat the process if necessary
MonsoonSIM Service KPIs

1. Complaint handled - vendor by Finished Goods Vendors
2. Complaint by vendor by Finished Goods Vendors
3. Complaint received
4. Sales - Service
5. Service Bid completed
6. Complaint handled
7. Complaint by client by Clients
8. Complaint handled - client - by Clients
9. Complaint by vendor - by Raw Material Vendors