A METHOD AND SYSTEM FOR INFORMATION PROCESSING FOR ENTERPRISES

FIELD OF INVENTION

This invention relates to a method and system for information processing for enterprises. This invention has particular, but not exclusive, application in the field of evaluating the performance and health of enterprises.

BACKGROUND

For the smooth and efficient functioning of any enterprise, it is imperative to monitor the health of the enterprise at regular intervals. This is akin to monitoring the health of a human regularly which can be for medical diagnostic purposes. Monitoring the health of the enterprise can also help the management in making improvements related to any particular function in the enterprise, in spotting trends that may lead to serious issues which may be detrimental to the functioning of the enterprise, in monitoring the performance of the enterprise across various functions, in determining whether the performance of the functions have met the KPIs (Key Performance Indicators) designated, in improving the cost effectiveness of any particular function in the enterprise, etc.

For determining the health of the enterprise, primary data is initially required. The primary data is then processed and the health or performance indicators of the enterprise are then determined.

Current systems in place for determining the health of the enterprise include manual systems, ERP systems complemented with Data Warehousing and Business Intelligence tools. The current systems have inherent shortcomings and disadvantages.

SUMMARY

In accordance with a first aspect of the invention, there is disclosed a method of information processing for enterprises. The method comprises acquiring from each of at least one

division of an enterprise a set of primary information, the set of primary information associated with enterprise operations of the division within the at least one division of the enterprise. The next process step is converting each of the set of primary information acquired into at least one set of reportable information, the converting based on at least one conversion framework, the at least one conversion framework associated with the division within the at least one division with which the set of primary information is associated, each of the at least one conversion framework comprising a set of conversion rules. The next process step is providing the at least one set of reportable information to be reported, the at least one set of reportable information being indicative of the health of the enterprise.

In accordance with a second aspect of the invention, there is a disclosed a system for information processing for enterprises. The system comprises an acquisition module for acquiring from each of at least one division of an enterprise a set of primary information, the set of primary information associated with enterprise operations of the division within the at least one division of the enterprise. The system further comprises a conversion module for converting each of the set of primary information acquired into at least one set of reportable information, the converting based on at least one conversion framework, the at least one conversion framework associated with the division within the at least one division with which the set of primary information is associated, each of the at least one conversion framework comprising a set of conversion rules. The system further comprises a reporting module for providing the at least one set of reportable information to be reported, wherein the at least one set of reportable information being indicative of the health of the enterprise.

In accordance with a third aspect of the invention, there is disclosed a set of computer readable media storing program instructions. The program instructions when executed cause an information processing system comprising an acquisition module, a conversion module and a reporting module to perform an information processing operation. The information processing operation comprises acquiring from each of at least one division of an enterprise a set of primary information through the acquisition module, the set of primary information associated with enterprise operations of the division within the at least one division of the enterprise. The next process step is converting each of the set of primary information acquired into at least one set of reportable information by the conversion module, the converting based on at least one conversion framework, the at least one conversion framework associated with the division within the at least one division with which the set of primary information is associated, each of the at least one conversion framework comprising a set of conversion rules. The next process step is providing the at least one set

of reportable information to be reported by the reporting module, wherein the at least one set of reportable information being indicative of the health of the enterprise.

BRIEF DESCRIPTION OF DRAWINGS

The invention will now be described, by way of examples with reference to the drawings of which:

FIG 1 shows a process flow diagram of a method of information processing for enterprises

FIG 2 shows a system for information processing for enterprises

FIG 3 shows primary information being acquired by an acquisition module of the system in FIG 2

FIG 4 shows an example screenshot of primary information acquisition features used by the acquisition module of FIG 3

FIG 5 shows a chart depicting the different functions for which the system of FIG 2 or the method of FIG 1 can be applied

FIG 6 shows an information flow chart for the method of FIG 1 and the system of FIG 2

FIG 7 shows a screenshot of the system of FIG 2 with a plurality of diagnostic charts

FIG 8 shows a screenshot of the system of FIG 2 with a plurality of alarm charts

FIG 9 shows a screenshot of the system of FIG 2 with a plurality of charts

FIG 10 shows a screenshot of the system of FIG 2 with a plurality of slides

FIG 11 shows a screenshot of a strategic analysis visualization of the system of FIG 2

FIG 12 shows a screenshot of a report visualization of the system of FIG 2

DETAILED DESCRIPTION

In the disclosure herein, consideration or use of a particular element number in a given FIG. or corresponding descriptive material can encompass the same, an equivalent, or an analogous element number identified in another FIG. or descriptive material corresponding thereto.

In the present disclosure, the term “set” corresponds to or is defined as a non-empty finite organization of elements that mathematically exhibits a cardinality of at least 1 (i.e., a set as defined herein can correspond to a singlet or single element set, or a multiple element set), in accordance with known mathematical definitions. In general, an element of a set can include or be a system, an apparatus, a device, a structure, an object, a process, a physical parameter, or a value depending upon the type of set under consideration.

FIG 1 shows the method steps involved in a first example of a method 100 of information processing for enterprises. As illustrated in FIG 1, the method 100 comprises a first step 110, a second step 120 and a third step 130, which are described below. In the first step 110, the method acquires from each of at least one division of an enterprise a set of primary information. In the second step 120, the method 100 converts each of the set of primary information acquired into at least one set of reportable information. In the third step 130, the method 100 provides the at least one set of reportable information to be reported. The above steps will be described below. Enterprise here refers to an organization, and specifically a business organization. The organization can belong to any industrial segment, examples being manufacturing industries, design industries, pharmaceutical industries, service companies, aerospace industries, casinos, real estate industries, etc. The above are just examples and the invention is not limited in any way to be associated only with them. The objective of the invention is to process information associated with the enterprise or business organization to which the method 100 is applied.

To elaborate, any enterprise has at least one division, wherein each division is associated with a particular business function within the enterprise. For example, the functions in an enterprise can be marketing, sales, product development, research & development, finance, HR, manufacturing, supply chain etc. Enterprises belonging to different business segments have different types of functions and divisions associated with them. In some instances, even enterprises belonging to the same industrial segment can have different functions and associated divisions inside them.

FIG 2 shows a system 1000 for information processing for enterprises. The system 1000 can be a software based system. The system 1000 comprises an acquisition module 1100, a conversion module 1200, a reporting module 1300 and a storage module 1400. The acquisition module 1100 performs the first step 110, the conversion module 1200 performs the second step 120 and the reporting module 1300 performs the third step 130. The storage module 1400 can store at least one of the set of primary information and the set of reportable information. This will be explained below. The modules 1100, 1200 and 1300 can be developed by utilizing Microsoft Excel and Visual Basic. In other words, the system 1000 can be developed and running utilizing Microsoft Excel and Visual Basic, which will be explained hereinafter. The system 1000 runs or is executed as an application that runs in a computing device, namely a desktop, laptop etc. The storage module 1400 can be any storage device used with computers, laptops and servers, which is understood by a person skilled in the art. To elaborate, the system 1000 is computer based configured to model and diagnose the state of performance of the enterprise and display the diagnosis, trend or correlation graphically.

The various functional activities or processes carried out in the different divisions of any enterprise usually have qualitative and quantitative information associated with it. To elaborate, examples of quantitative information can be as follows:

(a) contents of purchase receipts, which detail the number of units of a particular commodity sold by the enterprise and the price for which it was sold, which go towards calculating the revenue generated by the enterprise for a given time period
(b) in a trading enterprise, the contents of purchase receipts from the vendor detailing the number of units of a particular commodity sold to the enterprise and the price for which it was sold, which go towards calculating the costs for the enterprise
(c) salaries and cost to company information of employees in an enterprise which go towards calculating the costs for the enterprise
(d) attrition rate in the enterprise, which can go towards evaluating the projected personnel needed for the future and the happiness level of the employees in the enterprise
(e) expenses for R&D in the enterprise, which can go towards evaluating the costs for the enterprise and also to decide whether the particular R&D exercise is justified
(f) the number of patents files by the enterprise, which can go towards evaluating the valuation of the enterprise and the innovation index of the enterprise.
(g) the number of hours taken by different employees to complete a similar task, which can go towards evaluating the performance of employees

(h) the number of customer complaints, which go towards evaluating the quality of any product manufactured by the enterprise
(i) quality feedback on a numerical scale provided by clients after a service call, which can go towards evaluating the service quality of the enterprise and also the performance of any customer support officer in the enterprise
(j) number of accidents in the workplace or in the manufacturing floor, which can go towards evaluating the safety record for the enterprise
The above examples are for the purposes of explanation only and the quantitative information described above is not limited in anyway to the above examples.

To elaborate, examples of qualitative information can be as follows:
(a) service quality feedback collected through different channels in an enterprise
(b) product or commodity quality feedback collected by the enterprise
(c) performance information of employees provided by superiors of the employees concerned and collected by the HR department in any enterprise

The above examples are for the purposes of explanation only and the qualitative information described above is not limited in any way to the above examples.

The quantitative and qualitative information collected by various channels in an enterprise is referred to as primary information. The primary information that flows in the enterprise is recorded by using various tools such as Excel sheets, ERP systems in place and/or BI (Business Intelligence) systems installed in the enterprise. The functioning of ERP systems and BI systems is understood by a person skilled in the art.

In the first step 110, data points in each set of primary information acquired from the at least one division of the enterprise can vary. For example, the set of primary information acquired from the first division can have 10 data points and the set of primary information acquired from the second division can have 5 data points.
FIG 3 shows primary information being acquired by the acquisition module 1100 of the system 1000 in FIG 2. In the first step 110, the acquisition module 1100 acquires primary information from at least one of MS Excel sheets 1110 maintained in the server of the enterprise, ERP systems 1120 installed in the enterprise and BI/Business Warehouse (BW) systems 1130 installed in the enterprise. The system 1000 utilizes the network connection and capabilities of the computing device in which it runs or is executed to acquire primary information as described above.

FIG 4 shows an example screenshot of the primary information acquisition features used by the acquisition module 1100. As illustrated in FIG 4, buttons 1101, 1102, 1103 and 1104 are used to capture primary information by connecting to any one of MS Excel sheets 1110, ERP systems 1120 and BI/BW systems 1130. For the sake of explanation, the functionality of only buttons 1101, 1102, 1103 and 1104 are described. The other buttons in the screenshot of FIG 4 can similarly be used to acquire primary information as well. The captured primary information is stored in the storage module 1400. A button 1105 can be used to exit the screen shown in the screenshot of FIG 4.

As described earlier, the conversion module 1200 performs the second step 120, in which the method 100 converts each of the set of primary information acquired into at least one set of reportable information. The converting described above is based on at least one conversion framework, the at least one conversion framework associated with the division within the at least one division with which the set of primary information is associated, each of the at least one conversion framework comprising a set of conversion rules. To elaborate the above, an example of sales department of a trading enterprise is used. The sales department is the sales division for the purposes of explanation here. The set of reportable information for the sales division can include total day sales, average day sales among many others. The set of primary information for the sales division can include the number of purchase/sales receipts with the sales amount.

The conversion framework associated with the sales division facilitates converting the primary information into the set of reportable information described above. The conversion framework comprises a set of conversion rules. The set of conversion rules comprises one or more conversion rules. Each conversion rule within the set of conversion rules calculates a specific reportable information within the set of reportable information. For example, total day sales and average day sales are two distinct reportable information within the set of reportable information. The primary information for the above two reportable information is the same. The conversion rule for calculating total day sales instructs adding up the sales amount in all the purchase/sales receipts for a given day. Likewise, the conversion rule for calculating average day sales instructs adding up the sales amount in all the purchase/sales receipts for a given day and divide the sum by the total number of sales/purchase receipts. The above is just an example for the purposes of illustration.

The set of reportable information can be referred to as a set of KPIs (Key Performance Indicators). The conversion of the set of primary information results in the determination of KPIs. KPIs in general are for measurement of performance of the enterprise as a whole or

any division inside the enterprise. KPIs are commonly used by enterprises to evaluate the performance of a particular function carried out in any division of the enterprise. In other words, the at least one set of reportable information can be indicative of the health of the enterprise or any division of the enterprise. KPIs can involve mathematical computations on the basis of the primary information acquired from the at least one division of the enterprise, as described above. KPIs are usually a reflection of the past activities. Hence, KPIs can be used to take corrective action on the functioning of the particular division so that the functioning of the division matches and aligns with the objectives and goals of the division. This is to ensure that the performance of the particular division improves over time.

Some examples of KPIs for new product function can be:
(a) No of active primary materials specified
(b) No of justified quality complaints
(c) No of active finished product specified
(d) No of finished product formulations
(e) No of primary materials
(f) Monetary value of formulation savings ($)

Some examples of KPIs for Sales function can be:
(a) Sales volume (kg)
(b) Percentage gross margin
(c) Days sales outstanding (days)
(d) Revenue per customer order ($)
(e) Sales forecast accuracy (%)
(f) Organic growth (%)

Some examples of KPIs for Order function can be:
(a) Customer service level (%)
(b) Back order volume (kg)
(c) Documents lead time (days)
(d) Complaint closure lead time (days)
(e) Volume per delivery (kg)
(f) Service lead time (days)

Some examples of KPIs for Purchase Order function can be:
(a) Primary materials service level (%)
(b) Primary material quality conformance (%)

(c) Primary material DOH (days)
(d) Supplier complaint lead time (days)
(e) Primary material lead time (days)
(f) Primary material cost savings ($)

Some examples of KPIs for Production function can be:
(a) Production plan attainment (%)
(b) First time right (%)
(c) Material yield (%)
(d) Throughput rate (kg/man-hr)
(e) Unit conversion cost ($/kg)
(f) Production lead time (days)

Some examples of KPIs for Packaging function can be:
(a) Packaging plan attainment (%)
(b) First filing right (%)
(c) Material yield from packing (%)
(d) Throughput rate (kg/man-hr)
(e) Unit packaging cost ($/kg)
(f) Packing lead time (days)

Some examples of KPIs for Distribution function can be:
(a) Total inventory on hand (kg)
(b) Slow moving inventory (%)
(c) Delivery lead time (days)
(d) No of finished product SKUs
(e) Unit distribution cost ($/kg)
(f) Total DOH (days)

Some examples of KPIs for Support function can be:
(a) No of justified complaints
(b) Complaint closure lead time (days)
(c) No of repeated causes
(d) No of open complaints
(e) Total no of complaints
(f) Cost of quality ($)

The above mentioned list of KPIs are just examples and the method 100 and system 1000 are not limited to the determination of these KPIs alone.

As described earlier, the reporting module 1300 performs the third step 130, in which the method 100 provides the at least one set of reportable information to be reported. Reporting of the at least one set of reportable information involves visually displaying the at least one set of reportable information in the forms of slides, graphs and/or charts. Alternatively, the reporting of the at least one set of reportable information can be performed in the form of documentary reports sent to the user of or person designated in the method 100 or system 1000.

The acquisition module 1100 of the system 1000 comprises a connectivity module, which facilitates the acquisition module 1100 to be connected to at least one of Microsoft Excel sheets, ERP systems, BI systems and BW systems located in the enterprise. The connectivity can be LAN based or internet based.

A set of computer readable media such as hard disks, optical disks and other storage media can store the program instructions. The program instructions when executed cause the information processing system 1000 as described above to perform an information processing operation or method 100. The information processing operation comprises acquiring from each of at least one division of an enterprise a set of primary information through the acquisition module 1100, the set of primary information associated with enterprise operations of the division within the at least one division of the enterprise. The next step in the information processing operation comprises converting each of the set of primary information acquired into at least one set of reportable information by the conversion module 1200, the converting based on at least one conversion framework, the at least one conversion framework associated with the division within the at least one division with which the set of primary information is associated, each of the at least one conversion framework comprising a set of conversion rules. The next step in the information processing operation comprises providing the at least one set of reportable information to be reported by the reporting module 1300.

Any of the KPIs can be pulled together in any manner automatically by the method 100 or by the user of the system 1000 and the health of the particular division or the enterprise as a whole can be diagnosed efficiently with respect to accuracy and time.

FIG 5 shows a chart depicting the different functions for which the system 1000 or method 100 can be applied. As illustrated in FIG 5, broadly the system 1000 or method 100 can be applied for functions associated with strategic management, financial/statutory compliance management and tactical management. The functions associated with strategic management are people management and asset/capacity management. The functions associated with financial/statutory compliance management are balance sheet management and profit & loss management. The functions associated with tactical management are EHS management, quality management, service management and revenue/cost management. These functions are understood by a person skilled in the art. The system 1000 can also be used for supply chain management for determining flow of primary materials and finished products and transportation and delivery of products and services.

FIG 6 shows an information flow chart for the method 100 and the system 1000. As illustrated in FIG 6, the primary information is processed and converted into visual information to be displayed on the screen of the computing device on which the software of the system 1000 is being executed. As illustrated in FIG 6, there are different types of visualizations as depicted by Cockpit View and Executive Cockpit View. The Executive Cockpit View provides a wholesome diagnostic view of the enterprise, which is suitable for making strategic and corporate decisions. The software of the system 1000 can be configured such that the Executive Cockpit View can be accessed only by certain users who belong to the executive category. The access can be controlled based on user level rights and permissions. The aggregation illustrated in FIG 6 basically aggregates the visual representations into a block as shown in the Cockpit View and Executive Cockpit View.

The software of the system 1000 built using MS Excel and Visual Basic comprises dynamic formula that can overcome boundary conditions like handling row zero or column zero in MS Excel environment without encountering errors. The system 1000 can also keep the dynamic formula intact and continue to maintain the relationship with the input cell despite having being included in a sort routine.

The software of the system 1000 has a display which comprises an alarm panel differentiating functions based on their performance. So this provides a summary of the whole enterprise which can be interesting to senior executives of the enterprise. The display of the system 1000 can display visual representations of the KPIs that can be generated for a selectable period of time.

The conversion module 1200 of the system 1000 comprises three operating engines – a tactical analyzer, a strategy analyzer and a report card analyzer. The tactical analyzer generates sequential or time-dependent plots for one or more KPIs on the same chart. This is the default analyzer on every entity worksheet. The tactical analyzer is most commonly used to gauge the status of operations or financial health of the enterprise at a specific point of time or over time. The user of the system 1000 has the choice to view the data on monthly, quarterly or annual trend or period over period in multi-year comparison. Moreover, comparative trends can be established for KPI performances against budget, forecast or other estimates. Multi-KPIs correlation analysis provides insights into KPIs with different polarity. The alarm panel and diagnostic panel in the cockpit and the executive cockpit are part of the tactical analyzer with knowledge management elements embedded. The user of the system 1000 can select the type of chart to be displayed from an array of charts.

The strategy analyzer can evaluate enterprise performances independent of time. The strategy analyzer is mostly used for KPI comparison across different sites, divisions and/or products of the enterprise for identifying any structural areas of strengths and/or weaknesses for the enterprise. The strategic analyzer is used for identifying improvement opportunities through KPI comparison across peers of the enterprise.

The report card analyzer provides a graphic display of the various performance measures for a single function, enterprise or division with comparisons with set target and/or with peers of the enterprise.

The software of the system 1000 comprises a plurality of tabs, wherein each tab is configured for a system function or a set of related system functions. The plurality of tabs comprise a control tab, a strategy tab and a cockpit tab. The control tab is also referred to as a control centre. The control tab is the command centre which determines which KPIs, functions or entities come into the model, formatting the numbers inside the model, the charts best used to describe the underlying data and the scope of the date being represented. The control tab stores the chart plot parameters for all the diagnostic charts. The control tab also determines when and where the charts created should be temporarily stored before they get sorted and deposited into the dash board or a slides gallery during any of the mass slide production run which can run into 300 slides for a complex enterprise. The control tab also comprises some design features like the intelligent formula that allow a few columns of formulae to be sorted together by rows and/or columns.

The strategy tab provides sophisticated data selection, conditioning and manipulation in a way that allows the data to be displayed with a special visual impact. The strategy tab also displays single and/or multiple KPI performances across multiple sites, entities and/or functions of the enterprise.

The cockpit tab provides operation control for monthly reports, slide shows etc.

The software of the system 1000 also comprises a special effect data analyzer, which provides single/multiple KPI correlation analysis. The special effect data analyzer also provides currency conversion features for ease of comparison across sites, division and/or functions of the enterprise in different countries. The special effect data analyzer also provides analysis of foreign exchange impact on any KPI. The special effect data analyzer also provides leading-lagging time correlation analysis between KPIs. The special effect data analyzer also provides multi-year growth analysis. The special effect data analyzer also provides comprehensive chart scaling and formatting features. The special effect data analyzer also provides chart creation facilities to pull together any KPI from any function or entity to create any diagnostic chart for analysis of root causes of problems or correlation analysis. The special effect data analyzer also provides options for standard embedded chart view, scroll view, banner view, slide view and/or full screen slide view. The special effect data analyzer also provides the user with a pre-defined sample chart while allowing further manipulation using MS Excel standard charting tool.

The software of the system 1000 provides LockXLS security with activation locked for use with specific computers only. The software of the system 1000 provides a server-friendly model for multiple users, each with a separate identification code and password. Moreover, the passwords can be encrypted. The software of the system 1000 also provides administrative access rights to manage accesses of other users. The software of the system 1000 also provides facility to rebuild a new enterprise model from scratch.

Before the primary information is transmitted from the acquisition module 1100 to the conversion module 1200, the primary information can be manipulated and conditioned such that only the required portion of the primary information is transmitted to the conversion module 1200.

Microsoft Visual Basic for Applications (VBA) is the main programming language used in the software of the system 1000. The software of the system 1000 also includes Microsoft Excel (MS Excel). The related macros in MS Excel are organized using Modules concept of VBA.

The custom dialog boxes or forms for interfacing with the users are created with the help of UserForm features of VBA. The Workbook-Open tool is an event management tool in VBA, which is used to fire off messages for users, such as alerting the user to their license expiration date or to the licensing terms and conditions when the workbook is opened. The workbook here refers to the software of the system 1000.

MS Excel dialog boxes are used for interaction with the users. Standard VBA Msgbox function is used frequently for debugging, sending reminders or used as on-line help to guide the user through a specific task being executed by a macro. Error message handling routines are used to terminate a macro under certain scenarios in order to maintain stability of the software of the system 1000. MS Excel conditional formatting has been deployed for the alarm panels, with green for KPI levels exceeding threshold or performance levels and red for KPI levels not meeting threshold or performance levels. All cells in all the worksheets in the workbook are protected to prevent any inadvertent errors from users.

Some of the advanced MS Excel functions that are used are Search, Index, Offset, Sum, SumIf, Vlookup and a combination of the above. However, the above list is not exhaustive and other MS Excel functions can also be used. The software of the system 1000 is secured by LockXLS, which allows the software of the application to be opened only on authorized computers.

Rectangular shaped objects from MS Excel with a descriptive name provided to each of the objects are used for specific macro activation. The above described take the shape of a button. The buttons are placed at the top of each worksheet in the workbook and are visible to the user of the software.

The charts and slides used for displaying have automatic sizing capabilities to cover a certain range of cells. This allows the chart to fit perfectly to a range, regardless of the width and height of the column and row setting. On the cockpit and the executive cockpit display, the software of the system 1000 provides the user with the option of enlarging or collapsing any of the charts and/or move them around the worksheet.

The types of MS Excel charts used for display are as follows: line, bar, column, pie, radar, waterfall and XY. Among column charts, stacked, clustered or a combination of stacked and clustered can be used. Among line charts, single, multiple, multiple on two axes, SPC or a stacked line and column combination can be used. Among waterfall charts, single variable

cumulative or two variable cumulative difference can be used. Among XY charts, multiple XY, multiple XY on two axes or single XY can be used.

All the KPIs for any enterprise or any division of the enterprise are contained in the system 1000. Since the system 1000 and the method 100 has the capability to acquire primary information from at least one of MS Excel sheets 1110, BI/BW systems 1120 and ERP systems 1130, the system 1000 and the method 100 can be used anytime and anywhere, provided the system 1000 is provided with electronic connectivity for acquiring primary information. As the set of processed information is available in a substantially small amount of time, in the order of minutes, the system 1000 and method 100 provides savings in terms of time and labour. In this way, the at least one of MS Excel sheets, ERP systems and BI/BW systems installed can be utilized in an improved way. The system 1000 serves as a knowledge warehouse, where designated people in the enterprise can extract information anytime and anywhere.

The system 1000 is designed in such a way that it can be contained in a single MS Excel workbook accessible instantly. Real time information is important for making decisions in any enterprise. The output of the system 1000 can provide a real time picture of the functioning of the enterprise or any particular division in the enterprise. Since the complete primary information acquisition, primary information processing and reporting processes are controlled and reside in the system 1000, no human involvement is required for the above, providing the advantage of eliminating human and manpower training for using the system 1000.

The interface provided to the user by the system 1000 can be user-friendly and the KPIs and charts and trends of any particular function can be displayed in response to a click of a button. Because of the user-friendly features of the system 1000, the system 1000 is very easy to learn to use.

Further, the system 1000 has the capability to compare two or more KPIs being reported visually in the form of graphs or charts. This enables the user to understand the relationship between the compared KPIs, thus throwing light on new enterprise diagnostic parameters which can be conceived and visualized spontaneously and on the run while a group of people are using the system 1000. The comparison described above can also be viewed across different time periods, which includes past trends and future extrapolations. The future extrapolations can be based on the primary information acquired.

As the system 1000 and the method 100 can interact with ERP systems, BI/BW systems installed in the enterprise, which has been described above, the system 1000 and the method 100 complements the installed ERP system and BI/BW systems. This provides the advantage of acquiring the primary information directly from the ERP systems and associated systems, so that the primary information need not be added to the system 1000 manually.

The system 1000 can transmit primary and reportable information to cloud based servers as well to be downloaded at a different location.

FIG 7 shows a screenshot of the system 1000 of FIG 2 with a plurality of diagnostic charts. Each chart of the plurality of diagnostic charts is displayed in a single cell of an MS Excel worksheet. In response to the user clicking on any cell of the worksheet corresponding to a diagnostic chart, the system 1000 opens up the chart associated with the cell clicked. The opened up chart display the reportable information.

FIG 8 shows a screenshot of the system 1000 of FIG 2 with a plurality of alarm charts. Each chart of the plurality of alarm charts is displayed in a single cell of an MS Excel worksheet. The characters in each of the cell are displayed in either red or green colour. Red colour indicates that the KPI indicated in the cell has not satisfied the threshold KPI allotted for the particular KPI. Green colour indicates that the KPI indicated in the cell has satisfied the threshold KPI allotted for the particular KPI. In response to the user clicking on any cell of the worksheet corresponding to the alarm chart, the system 1000 opens up the chart associated with the cell clicked. The opened up chart display the reportable information or the KPI.

FIG 9 shows a screenshot of the system of FIG 2 with a plurality of charts. FIG 10 shows a screenshot of the system of FIG 2 with a plurality of slides.

FIG 11 shows a screenshot of a strategic analysis visualization or chart of the system 1000. The strategic analysis chart can be an aggregation of the display of the performance of different entities of the enterprise. For example, the entities can be different sites in which the enterprise is operating. Alternatively, the entities can be different profit centres of the enterprise. As illustrated in the example of FIG 11, the entities are branches of the enterprise in different countries namely China, Australia, Malaysia, Taiwan, Philippines, Hong Kong, Thailand, Singapore, Japan, Korea and Vietnam. Within each entity or country, different expenditures such as salary, medical, housing overtime etc are measured. Alternatively,

within each entity, different KPIs can be measured as well. The strategy analysis visualization provides information to make strategic decisions for the senior management.

FIG 12 shows a screenshot of a report visualization of the system 1000. An example of a report card as illustrated in FIG 12 shows the growth of different evaluation parameters or KPIs. Similarly, the report card can be used for visualization of any parameter.

It is to be understood that the foregoing description is intended to be purely illustrative of the principles of the disclosed techniques, rather than exhaustive thereof, and that changes and variations will be apparent to those skilled in the art, and that the present invention is not intended to be limited other than as expressly set forth in the following claims.

CLAIMS

1. A method of information processing for enterprises, comprising:

acquiring from each of at least one division of an enterprise a set of primary information, the set of primary information associated with enterprise operations of the division within the at least one division of the enterprise;

converting each of the set of primary information acquired into at least one set of reportable information, the converting based on at least one conversion framework, the at least one conversion framework associated with the division within the at least one division with which the set of primary information is associated, each of the at least one conversion framework comprising a set of conversion rules; and

providing the at least one set of reportable information to be reported, the at least one set of reportable information being indicative of the health of the enterprise.

2. The method as in claim 1, wherein acquiring from each of at least one division of an enterprise a set of primary information comprises

extracting the set of primary information from at least one of Microsoft Excel sheets, Enterprise Resource Planning systems, Business Intelligence systems and Business Warehouse systems.

3. The method as in claim 1, wherein the set of primary information comprises at least one of qualitative information and quantitative information.

4. The method as in claim 1, wherein providing the at least one set of reportable information to be reported comprises providing the at least one set of reportable information to be visually displayed.

5. The method as in claim 4, wherein visually displaying the at least one set of reportable information comprises displaying the at least one set of reportable information in the form of at least one of slides and charts.

6. The method as in claim 4, wherein providing the at least one set of reportable information to be visually displayed comprises providing the at least one set of Key Performance Indicators to be visually displayed.

7. A system for information processing for enterprises, comprising:

an acquisition module for acquiring from each of at least one division of an enterprise a set of primary information, the set of primary information associated with enterprise operations of the division within the at least one division of the enterprise;

a conversion module for converting each of the set of primary information acquired into at least one set of reportable information, the converting based on at least one conversion framework, the at least one conversion framework associated with the division within the at least one division with which the set of primary information is associated, each of the at least one conversion framework comprising a set of conversion rules; and

a reporting module for providing the at least one set of reportable information to be reported, the at least one set of reportable information being indicative of the health of the enterprise.

8. The system as in claim 6, wherein the acquisition module comprises a connectivity module for facilitating the acquisition module to be connected to at least one of Microsoft Excel sheets, Enterprise Resource Planning systems, Business Intelligence systems and Business Warehouse systems located in the enterprise.

9. A set of computer readable media storing program instructions that when executed cause an information processing system comprising an acquisition module, a conversion module and a reporting module to perform an information processing operation, the information processing operation comprising:

acquiring from each of at least one division of an enterprise a set of primary information through the acquisition module, the set of primary information associated with enterprise operations of the division within the at least one division of the enterprise;

converting each of the set of primary information acquired into at least one set of reportable information by the conversion module, the converting based on at least one conversion framework, the at least one conversion framework associated with the division within the at least one division with which the set of primary information is associated, each of the at least one conversion framework comprising a set of conversion rules; and

providing the at least one set of reportable information to be reported by the reporting module, the at least one set of reportable information being indicative of the health of the enterprise.

10. The information processing operation as in claim 9, wherein acquiring from each of at least one division of an enterprise a set of primary information comprises

extracting the set of primary information from at least one of Microsoft Excel sheets, Enterprise Resource Planning systems, Business Intelligence systems and Business Warehouse systems.

11. The information processing operation as in claim 9, wherein the set of primary information comprises at least one of qualitative information and quantitative information.

12. The information processing operation as in claim 9, wherein providing the at least one set of reportable information to be reported comprises providing the at least one set of reportable information to be visually displayed.

13. The information processing operation as in claim 12, wherein visually displaying the at least one set of reportable information comprises displaying the at least one set of reportable information in the form of at least one of slides and charts.

14. The information processing operation as in claim 12, wherein providing the at least one set of reportable information to be visually displayed comprises providing the at least one set of Key Performance Indicators to be visually displayed.