Artificial intelligence in Business mgmt. software

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Artificial intelligence in Industrial software

WHAT IS AI?

Artificial Intelligence is the behavior of a system similar to *human being* to give solution for a given problem after *understanding its full environment* to maximize the chance to achieve the intended goal

Artificial Intelligence in software examples:

Speech recognition and typing software (Dictation software) currently available in the market. (infinite env. possibilities)
Chess game software (moves coin after understanding the current environment of coins on the chess board) . (Finite env. possibilities but many in numbers)

Automatic decision making in self driving car (example telsa) (Finite env. possibilities but not many in numbers)

Key characteristics Artificial Intelligence in software examples:

1. Modeling human problem solving in software by understanding the whole current environment
2. Predicting from past behavior for decision using data-mining techniques.
3. Handling huge data in short time
4. Adopting the management policy on different aspect of business
5. Automating all possible business process without human intervention.

AI based Industrial software is like Chess game software but for industry.

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Conventional Software and AI Based software

Conventional software react for user action *(when you click the report button it works to generate a pre-defined report)* . It doesn't work on its own.

But AI Based Software works on it own in the background.

There are two layers in AI based software:

First layer is visible to user like conventional software reacting to user actions

Second layer is hidden - will not be available to user. It works on its own by monitoring the changes in the entire database environment and act on it accordingly to generate and stores different outputs.

The first layer will ask the second layer for special input required by it to react to the customer action. No data collection or analysis in done at this point of time by first layer, but the readily available information from Second layer is simply taken by First layer for calculations and displays to the users in the predefined report format. This means quick response is possible even in huge data analyzing case as these data collection and analysis is already done by second layer.
(Example : top 10 customers with decreasing month-wise total sales for the past 5 years)

We call the second layer as Business Intelligence Module (**BIM**).

AI base software is the extension of conventional software with more complexity.

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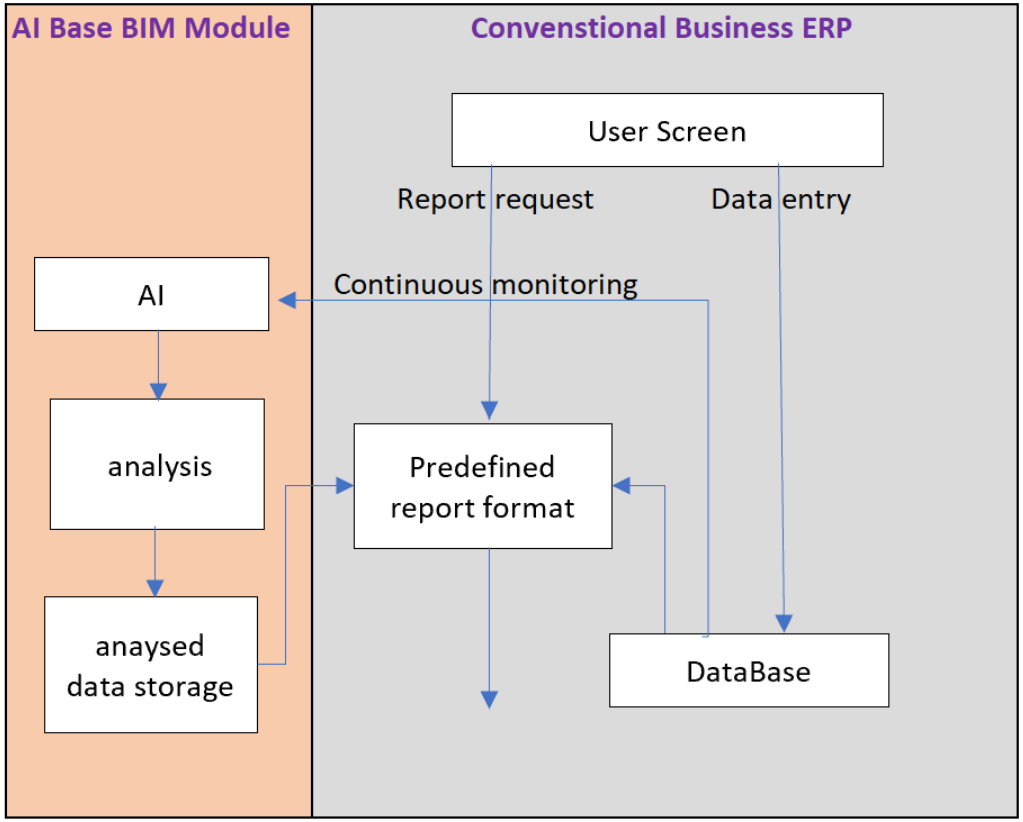

We develop such AI base software for individual customer

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Our AI Based software

Our AI based software has following three special features in addition to conventional software features:

1. Business Intelligence Module continuously monitors the changes in data across database and take some conclusions to provide to front end wherever requested.

2. Does many standard business processes are automated. No need of any human intervention/Work. (2 examples are explained in following slides)

3. It provides the monthly analysis Report of every business function for monthly and people need to work on improvement where it points out and need to present to the management in monthly review meeting. Currently , every functional head make the performance presentation for the month and suggest improvements. Possibilities are there that they may miss few. There is no way to find it out unless top management sit with all data and analyses. Unfortunately they don't find time or has expertise in all functions. These limitations are removed in our software as it does all analysis and provide reports to entire management team. You will not miss anything. This is the major advantage. (Sales management analytical report for MRM is explained in following slides)

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RM INVENTORY MANAGEMENT – Fixing min stock (*one Example*)

- Lead-time stock – It is the average consumption X lead-time to purchase
- Buffer stock - Stock to manage sales fluctuation
- Min Stock = Lead-time stock + Buffer stock

BIM automatically Calculates based on 3 month consumption

(can be avg , max, min or biased towards max or towards min)

BIM automatically Calculates for each supplier / Product (days between the date of order release and date of receipt at stores)

BIM automatically decides One of them automatically based on mgmt. business policy

Mgmt Policy	Software assumed calculation method
No stockout is allowed at all	Max for calculating lead-time stock
stockout is allowed once in a while	Avg for calculating lead-time stock
Minimum inventory is the goal; few stockout does not matter	Min for calculating lead-time stock

BIM continuously monitor the entire business environment for changes to act instantly without waiting for any human intervention

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Basic Knowledge on the subject

BIM automatically Calculates based on 3 month consumption

(can be avg , max, min or biased towards max or towards min)

BIM automatically decides One of them based on mgmt. business policy

BIM does this

Calculated for each supplier / Product
(days between the date of order release and date of receipt at stores). But it not uniform!

Mgmt. Business Philosophy To be feed once

Mgmt Policy	Software assumed calculation method
No stockout is allowed at all	Max for calculating lead-time stock
Few stockout is allowed per month	Avg for calculating lead-time stock
Minimum inventory is the goal stockout does not matter	Min for calculating lead-time stock

BIM takes care of entire environment changes and updates Min stock automatically

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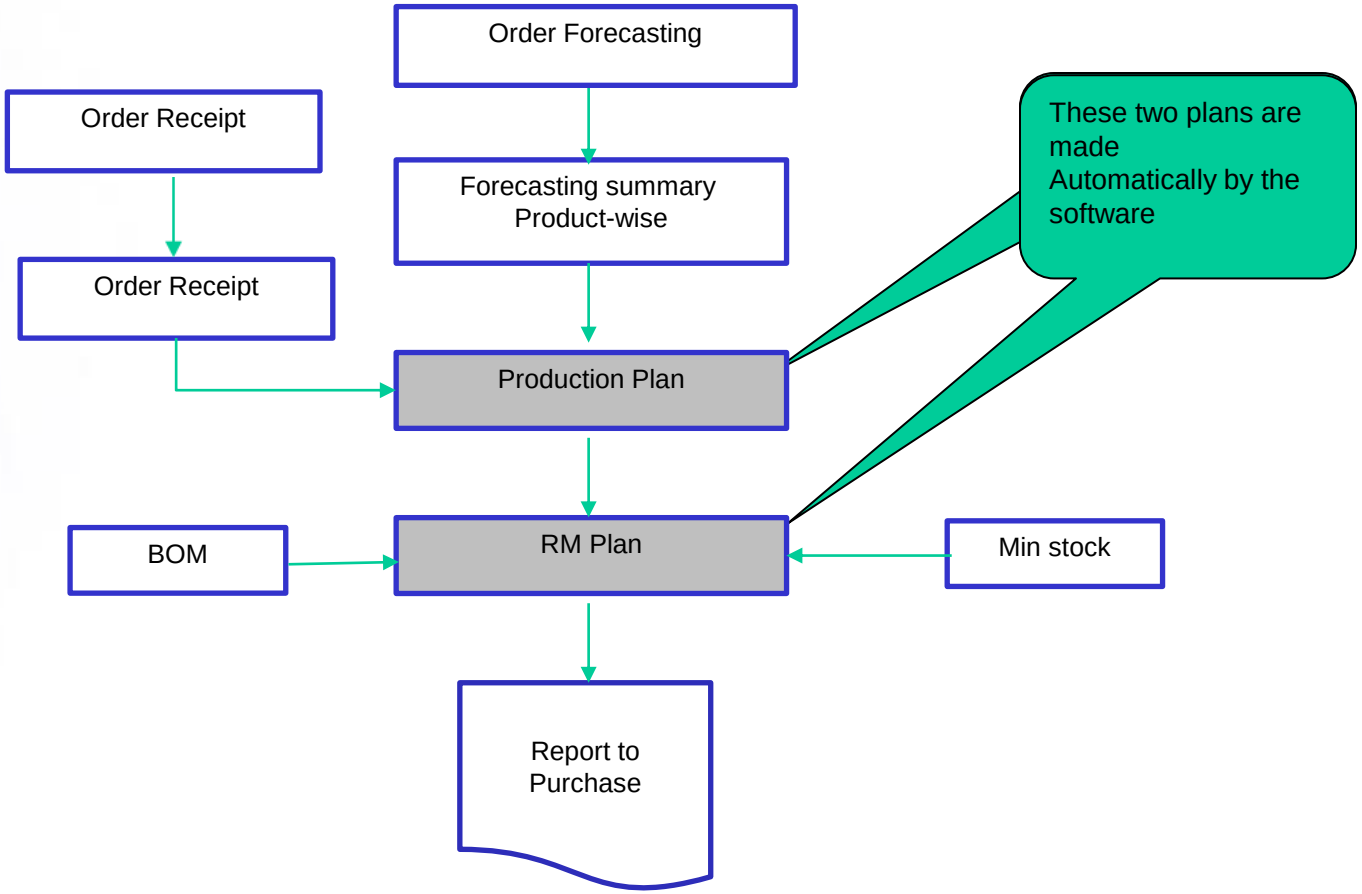
Business Process automation –RM Ordering Example



First layer (Front end) Prepares Both Plans for first time.

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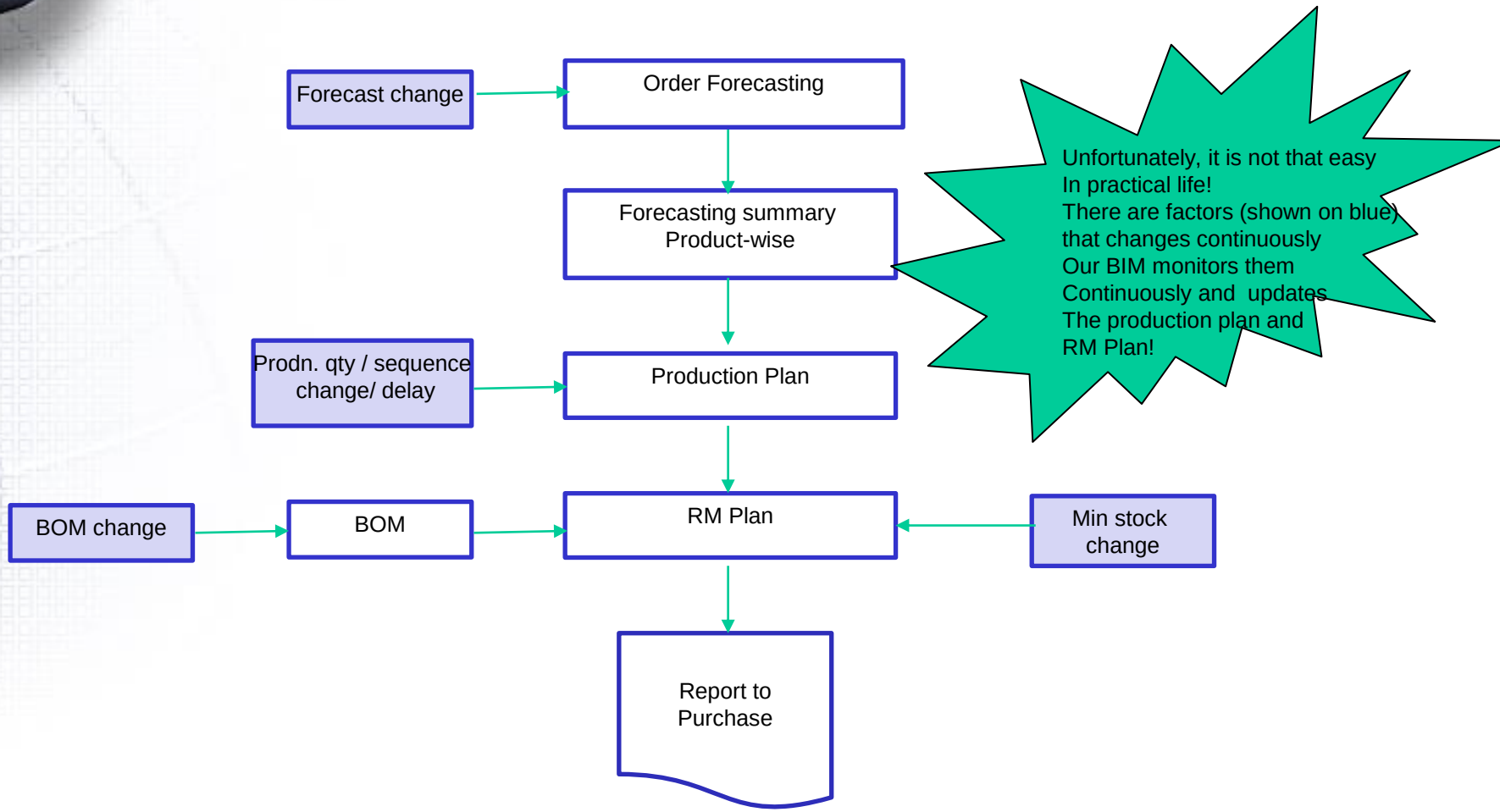
Business Process automation –RM Ordering Example



Second layer (BIM) updates Both Plans continuously.

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Sample Report

Prodn Planning Report - All (Mar 2021)

Being updated automatically by BIM

Customer	Product	Line ID	Batch No	Start Date	End Date	Planned Qty
Cus2	PD2	Line1	B03001	01/03/2021 06:00:00	01/03/2021 20:30:00	7,000
Cus4	PD3	Line1	B03002	01/03/2021 20:30:00	02/03/2021 10:30:00	7,000
Cus5	PD1	Line1	B03003	02/03/2021 10:30:00	02/03/2021 14:21:00	2,000
Cus4	PD3	Line1	B03004	02/03/2021 14:21:00	03/03/2021 04:20:00	7,000
Cus1	PD1	Line1	B03006	03/03/2021 04:20:00	03/03/2021 12:20:00	4,000
Cus4	PD3	Line1	B03007	03/03/2021 12:20:00	03/03/2021 18:20:00	3,000
Cus1	PD1	Line1	B03005	03/03/2021 18:20:00	04/03/2021 04:16:00	5,000
Cus1	PD1	Line1	B03008	04/03/2021 04:16:00	04/03/2021 08:15:00	2,000
Cus4	PD3	Line1	B03010	04/03/2021 08:15:00	04/03/2021 14:15:00	3,000

Production Plan generated by our software

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Sample Report

RMName	Stock	FGBatchNo	QtyNeeded	NeededOn	Stock C/B
RM1	18400.00	B03009	2000.00	28/02/2021	16400
		B0315	500.00	09/03/2021	15900
		B0313	500.00	09/03/2021	15400
		B317	1000.00	10/03/2021	14400
		[illegible]	3000.00	10/03/2021	11400
		BA106	200.00	03/04/2021	11200
		BA105	200.00	03/04/2021	11000
		BA109	500.00	03/04/2021	10500
		BA104	2500.00	04/04/2021	8000
		B502	1000.00	01/05/2021	7000
		B503	300.00	01/05/2021	6700
		B504	500.00	01/05/2021	6200
		B505	200.00	01/05/2021	6000
RM2	450.00	B03009	1200.00	28/02/2021	-750
		B0315	300.00	09/03/2021	-1050
		B317	600.00	10/03/2021	-1650
		BA104	1500.00	04/04/2021	-3150
		B504	300.00	01/05/2021	-3450
RM3	3700.00	B03009	800.00	28/02/2021	2900
		B0315	200.00	09/03/2021	2700
		B0313	500.00	09/03/2021	2200

This report is generated on 28/02/2021

Being updated automatically by BIM

From 28/02/2021 onwards the daily requirement of each RM and expected closing balance after removing the min stock qty for all future dates are given here

Purchase dept is automatically asked by software to order this material on 20/02/2021. Till the material reaches Factory, the buffer stock will be Consumed by production. Hence there will not be any shortage

On 28/02/2021 itself min is getting consumed to the extend of – value shown against each day. Some one need to follow-up pending RM order with supplier.

RM Order Plan generated by our software

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Performance report - sales management(sample dept) Report for MRM

- The following report is generated by software automatically and is available to both marketing team and Top Management.

Sales Management MRM – Sep 2021.

Performance to Appreciate:

1. The overall sales performance crossed the budget for the last 2 months although the cumulative is less by 15%.
2. West region is continuously exceeding cumulative budget with 3% more sales.
3. West region has added one new customer M/S SSSSSS that was not budgeted.
4. South region has achieved 100% in their collection.

The whole MRM concept is getting changed. Instead of HODs prepare the performance report and presenting, our software prepares it!

Since it is available well in advance, HODs get sufficient time to discuss with his team and prepare the action plan. More effective!

It is available to every one in the mgmt. well in advance to go thro and come with Questions. Hence MRM will be more meaningful !

TIME OF EVERYONE IS MORE PRODUCTIVE

Performance to improve:

1. The overall collection performance is poor at 75%.
2. West region collection is poorest among all at 73% followed by North at 78%
3. West region ONTIME delivery was only 92% .
4. South forecasting variation is high at 9% against acceptable limit of 3% ,while East and south forecasting variance are 1.8%, 2.5% with in acceptable limit of 3%
5. North region disturbed production 4 times with emergency orders.
6. East regional customers M/S. KKKK, VVVV , WWW orders were lesser by 22%, 12%, 45% against budget for this month.
7. In case of West customer M/S. CCCC, the gap between budget and actual continuously decreases for the past two months.

software prepares performance reports. HODs prepares action plans on points under performance to improve!

Features of our AI based software

- ✓ Designed as multiuser environment to operate by many with different login with different screen access and rights.
- ✓ Suitable for use with computer, tablets, mobile as it employs responsive design.
- ✓ Fits for hosting on the web server as well as local computer/server.
- ✓ Fully customizable as per Customer needs.
- ✓ Many business Processes are automated ; Less human intervention and more accurate and Live!
- ✓ Modular based design. User can go for adding module by module in stages to reach full ERP. Or select few modules needed to them. Every module can work independently as well as collectively

Features of our AI based software

- Down load presentations of different modules of our ERP from our website www.viewiss.com

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AI Based software become essential for better management in today's competitive business environment