
The Digital Enterprise



A white paper by
M76 Analytics



Blake Moret, chief executive of Rockwell Automation, a giant of the industry, answered to the Economist, “The convergence of software and hardware seen in the carpeted parts of enterprises is now seen on factory floors in every industry we serve”. Plans for Digitization have always been on whiteboards, and executive calendars for several years to start a digital journey. The Covid lockdown was like a much needed retreat, getting leaders to think how they ought to rewire their work. The key is how do you put together these various parts.

Putting the Jigsaw Together for Digital Transformation

Digitization has always enthralled Senior Management with its attendant benefits such as greater customer responsiveness or direct inventory reductions. They hear of the merchants of e-commerce companies fulfilling customized orders in days, and fulfilment levels as high as 98%. The advent of the fourth Industrial Revolution, also provides some elbow room to organizations contemplating re-shoring to revisit the cost structures along their value chain.

Varying managerial priorities have always triggered siloed initiatives within an enterprise. But their experiences have been mixed, often exposing the underbelly of Enterprise Applications, whose implementations more often than not lead to the deployment of an army of high priced consultants. The million dollar question then is how do leaders get a business return on digitization and how do they go about making the stakeholders see the visible results and the math behind the ROI.

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The key is also for the management to understand whether these are mere visualization products or whether these are actual complex numerical algorithms that are working on learning from the data behind and continually assessing to provide Intelligent Business Recommendations.

One of the most commonly required features is to have systems that necessarily put the power to work on the system in the hands of the user.

Empowered Users - Can there be systems that do not need re-configuration, can be integrated (Integration), and brought to the level of (Interpretation) and Interaction where these can be brought directly under the control of the user. That is often a very tough call, where the day in life of the enterprise product needs to be transformed into. A life of transaction codes needs to be mapped to a life of exception management workflows and simulators.

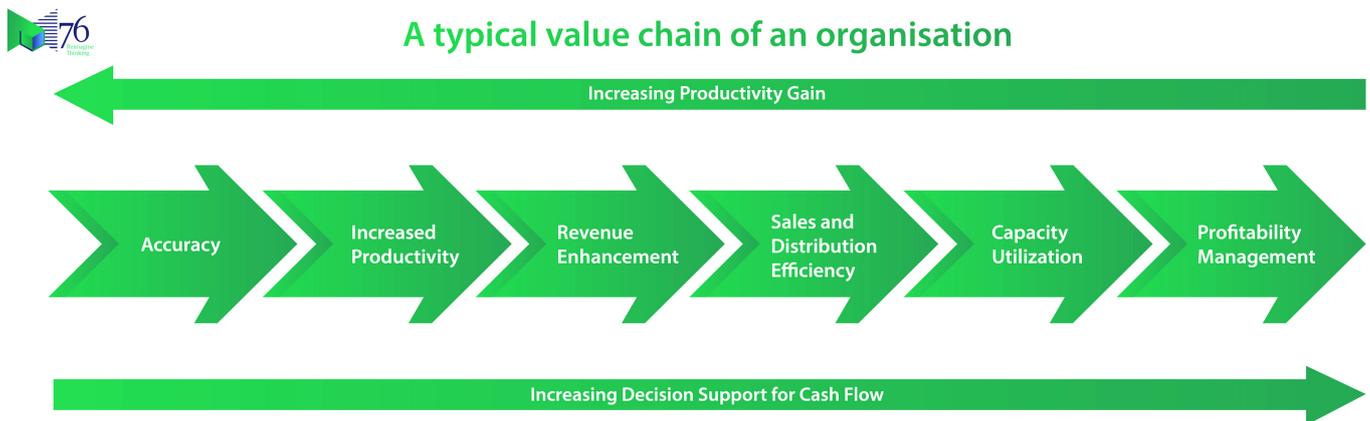
ASSESSING THE ROI FOR BUSINESS

The more rewarding the system, the benefits will typically move beyond vanilla man power saving.

Productivity gains are simply the first starting point and perhaps the easiest to understand. But they are not the limiting factor to AI systems that move enterprises to another orbit altogether. A rough picture along the value chain is presented below.

In the latter parts, it is about going beyond the mental capabilities of the Human being.

Let us deal with each agenda item step by step:



The Early steps of a Digitization journey are driven by enhanced productivity, and immediate gains in seamlessness, and ability to respond. For Example, Otto a German Retailer, uses an Algorithm by Blue Yonder to generate a month's consumption forecast at a user level with an estimated accuracy of 90%.

So the journey starts with immediate productivity enhancement. This is followed by first a larger level of responsiveness or customer fulfilment. Here it is going beyond the physical efficiency of the human being itself.

This is then followed by increasing effectiveness of the Sales and Distribution Channels. This is finally followed by enhanced Decision Support Systems for Management, and the ability to obtain recommendations for future strategies

Productivity Enhancement

Early Digitization tends to automate several processes which we call the 3I processes within a company, these are processes pertaining to Information gathering, Inference development, and knowledge Internalization. Typically these processes take lots of executive effort, and leadership bandwidth to get information to levels that are readily consumed, and to have pointers billboarded within the organization.

However mundane the first steps may sound, these are often critical activities like generating provisional P&L accounts, generating in a seamless fashion typical metrics the CEO would like to know. It might also be regarding triggers and alarms that are of immense value to the management or simply shining a light on areas of abnormality that would have otherwise gone unnoticed.

Internalization

Internalization is about getting key stakeholders on the same page within the organization having one version of truth, while also facilitating exception management on one single platform. The gains are not only in terms of productivity enhancement, but also massive gains in terms of compliance. Both of these go a long way in enhanced visibility of management goals to the senior leadership.

Responsiveness

Responsiveness – having moved beyond the primary objectives of digitization, the enterprise journey then segways towards consolidating its customer base. A propensity model that deals with enhancing revenue out of its customer base, is the next thing which comes onto the table. These journeys progress just outwards as one would progress moving from a circle of influence to a circle of concern.

While these are typical data mining exercises, they must not be viewed in isolation. They are the scaffoldings of the AI system yet to be born. These exercises give out the axioms that will in future be used to construct the edifice of AI in the Enterprise

At the axiomatic level , there are two key drivers of change. One is automation/visibility, the other is drawing of knowledge from Data lakes or simply Data Marts within the organization which provide the response to a situation. These are immediate tactical business opportunities.

As the data maturity grows, the system moves beyond the axiomatic phase to start making its own intelligent recommendations regarding customer behaviour. That is the first step which is a combination of productivity and responsiveness.

Effectiveness of Sales and Distribution Channels

From enhancing the very quantity of business, AI learns and moves toward enhancing the very quality of business. This means, the very profitability or the quality of sales can be effectively addressed in this section.

Complex numerical modelling and Optimization offer insights into the how's and why's of a big KPI construct. Your profitability is one such construct. Once the axioms and the learnings from data behaviour start showing up, it contributes to understanding customer life cycles, long term customer value, and the actual cost of the transaction. It's like simply saying what the transaction cost the business and the customer. And are these costs visible upfront to the organization. Is the actual COGS (Cost of Goods Sold) visible upfront to the key stakeholders in the organization? Using the very axiom of the cost of a transaction or the COGS, can product profitability or the costing be varied in the future? Can this be made a useful tool in the hands of senior management to build an effective Product Pricing and Channel commission strategy?

Decision Support for Future Strategy

This is the holy grail of AI. These are scenarios where you are looking at AI to provide recommendations that have an impact across the value chain. It is because they are supposed to play upon the operational and structural flexibility to create short term and intermediate term strategies that could help the organization take measures that can align the organization to the larger market.

The Vision on the Horizon

The end goal in a strong sense and response system is often to obtain the sensing portion accurate, Pervasive Sensing, a combination of IoT, along with AI can drive up revenues through opportunities in not just pushing products into the market but also with opportunities in sensing shifting preferences of the customers and then creating enough of an intelligence bed to generate Decision Support for future strategy. As a leading commentator puts it - The pandemic's bigger long-term impact may be a fuller embrace by firms of data their operations generate, and predictive algorithms to help guide real-time decisions.