

# **Process Automation Strategy in Services, Manufacturing and Construction**

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# **Process Automation Strategy in Services, Manufacturing and Construction**

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# Chapter 1

## Automating Business

Automation is a key aspect of any process management capability an organisation would establish. Aimed at improving Return on Investment (ROI) and streamlining processes to improve business outcome, automation covers all aspects of process management ranging from policy enforcement, decision making, reporting, monitoring, etc.

While every business is established to succeed and be the leader in its own domain or market, there are quite a few challenges organisation face with process management being at the core.

Over the years, organisations have made extensive investment on addressing their automation needs, but the evolution of technology such as Internet and adaptation of newer business models such as SaaS, have exposed organisation to newer automation challenges.

Standardisation and maturity of process management tools not only offers organisation a platform to optimally leverage the investments they have made but also enable them to establish a platform which would offer the level of agility required to cope with their growth and dynamic needs.

### Overview

Business Management is all about managing various processes involving both core and supporting ones. Process Management involves managing people, information and policies which govern what people can do with the information. Every organisation differ in the way their processes are managed, with these differences directly translating into competitiveness and hence business outcome.

Process management efficiency is measured in terms of the extent to which it ensures:

1. Optimal management of resources – people, partners, infrastructure, information.
2. Enforcement of policies, responsibility and authority – translating to better accountability.

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3. Automation of activities to improve efficiency and accuracy.
4. Agility to cope with dynamic business needs, such as growth, diversification, etc.
5. Monitoring and reporting of key business KPIs.
6. Compliancy and regulatory adherence.

### ***Business Process Automation (BPA)***

Automation is one of the key factors influencing the value derived by deploying any process management infrastructure. Automation eliminates the need for manual intervention with the intent of improving overall responsiveness and efficiency of any process. Automation could be achieved across all phases of process management such as planning, execution, deployment, monitoring, reporting, etc.

Typical automation use cases are:

1. Enforcement of SLAs to ensure high degrees of customer satisfaction in any service-oriented environment.
2. Initiation of procurement based on current inventory levels in a supply-chain environment.
3. Rules-based identification of a sales opportunity for renewal in a warranty management system.
4. Automated reporting on key parameters on a scheduled basis, e.g. end of the day report on customer escalations based on established business priority, etc.

Effective automation depends solely on the process management platform an organisation has deployed and on the tools/technologies used across the organisation to manage various functions. There are several challenges organisations face on automating their processes. In this chapter, we would look at some of these and also options organisations have to cope with them.

### ***Business Process Management Solutions***

Business process management solutions (BPMS) are specialised solutions used to manage various business processes such as Customer Relationship Management (CRM), Billing, HR, etc. Organisations deploy these solutions to improve productivity and manageability of the individual functional units. BPMS could vary from point solution such as Microsoft Dynamics, SalesForce CRM or Siebel CRM to a suite of solution built on a common platform such as Oracle ERP or SAP. One of the key factors in deciding the kind of BPMS to be deployed would be the cost associated both in terms of the tool as well as implementation and ongoing maintenance.

### ***Business Process Platform***

Business Process Platforms (BPPs) is an integrated environment which allows users of varying roles (Business owners, Business analysts, end users, ITs, etc.) in

an organisation to collaborate on implementing their process management infrastructure. It offers end-to-end capability which is geared towards high degrees of abstraction minimising time and cost to develop, deploy and manage. A good BPP is one which enables organisation to optimally leverage the investment they have currently made on BPMS and further extend these to address gaps or to accommodate changing business needs.

## Automation Challenge

In order to empower themselves to better manage their processes, organisations rely upon various BPMS or productivity improvement tools and methodology. Given the specialised needs of various processes and the impracticality associated with a single tool/vendor catering to all of these needs organisations adopt multiple tools and most often from different vendors. This forms the crux of all the process management problems faced by every organisation. The problem arises from the fact that ‘mission critical business knowledge being dispersed across multiple tools’ combined with lack of integration or standardisation among them constraining the extent to which processes could be automated (Figs. 1.1 and 1.2).

Acquisition and mergers further complicates the automation process with the same functional units within an organisation using solutions from different vendors and most often built on diverse technologies.

Globalisation of organisation also exposes additional complications with information being not only dispersed across tools, but also spanning geographic boundaries at times resulting in manual synchronisation of information across distributed sites (Fig. 1.3).

## Solution

Solution to the above problem would be to establish an enterprise process management infrastructure which integrates individual point solutions



Fig. 1.1. Automation Challenge Arising from A&M Activities.

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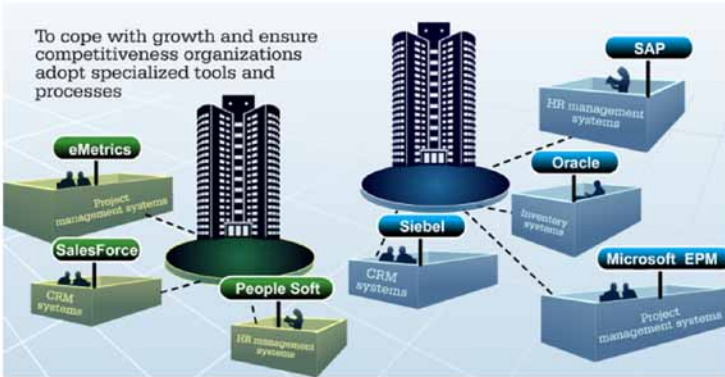


Fig. 1.2. Automation Challenge Because of Multiple Tools Being Deployed.



Fig. 1.3. Globalisation Challenge.

allowing organisations to define abstract processes spanning solution and functional boundaries. Organisation can achieve high degrees of automation, monitoring and reporting in the abstract layer, while allowing functional units to leverage the benefits offered by point solutions.

Traditionally, organisations invested in implementing custom process management infrastructure which included an integration framework require data to be moved across disconnected systems. Not only have these solutions resulted in huge overhead in terms of development and maintenance cost, but have also been rendered less efficient due to their inability to keep pace with changing dynamics of industry and business needs.

With the evolution of technology and standards such as Service Oriented Architecture (SOA), BPEL and newer business models such as SaaS-based delivery model, solutions based on loosely coupled SOA have proven to offer the level of flexibility and manageability of the integrated system which organisations have desired for.

As in any other case of implementing strategic initiatives, implementing a process infrastructure involves high degrees of risks and equally rewarding returns. In order to minimise the risks associated with disrupting day-to-day business, organisations follow a phased approach which involves stages as indicated in Fig. 1.4.

Each of these phases requires involvement of individuals with varying skills and expertise performing diverse sets of activities using numerous tools and technologies. Let us briefly look at each of these phases, traditional approach adopted as well as how organisation can benefit from BPPs like AppPoint's BizAPP Studio to achieve better results.

### *Unleashing Information from Existing Solutions*

The most challenging task an organisation has while planning on implementing an enterprise process management infrastructure is to optimally leverage the investment they have already made on tools, technology and skills they have developed around them.

This involves development of components which would communicate with individual tools using mechanism supported by the tools and exposing select information. To enable consistency in accessing information thus exposed, organisations are standardising on developing these as Web Services, which could form the foundation for an SOA-based information infrastructure.

As an outcome of this phase, organisations would not only empower users at all levels ranging from customers, partners, vendors and employees with real-time information captured from diverse data sources such as CRM, ERP, supply chain management (SCM), etc., but also enable them to define enterprise wide processes and policies which optimally leverage business knowledge and information sourced from disparate sources. Typical actors involved in this phase are:

- **Business analysts or domain experts** – who can decide as to what information are to be sourced from which point solution.
- **Architects** – who have extensive technology expertise.
- **Developers and Tool Experts** – develop tool-specific components to expose the information as identified by the analysts.
- **IT** – who would be responsible for deploying and managing the additional components being developed.

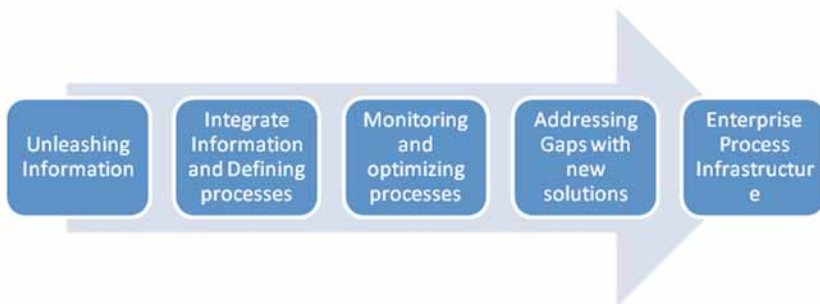


Fig. 1.4. Phased Approach to Development Process Management Infrastructure.

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As it can be seen from above, for an organisation to be able to initiate the process of establishing a process management infrastructure, they would have to make extensive investment and given the time factor associated to see the results, the risks with such an investment are higher. With maturity of standards, tools and technology such as BPPs like BizAPP which offers a model-driven approach to achieve non-intrusive integration, organisations can mitigate the risks to a great extent.

### ***BizAPP Virtualisation Framework***

BizAPP is architected ground up with a virtualisation technology for integrating and extending business solutions deployed in any organisation. Virtualisation involves graphically defining a BizAPP model for information managed by external systems. Depending on the solution being virtualised, virtualisation includes one or more of information virtualisation, behaviour virtualisation, workflow virtualisation and/or user-interface virtualisation. BizAPP supports two kinds of virtualisation:

1. **Technology virtualisation** and
2. **Solution virtualisation.**

Technology virtualisation in BizAPP enables organisations to quickly and graphically virtualise information being exposed by enterprise solutions using standards such as ODBC/JDBC, Web Services, etc. Solutions virtualisation is used when the application being virtualised either has a proprietary way of exposing information or requires further structuring before it could be virtualised.

Once information locked in point solutions is unleashed using virtualisation, organisation can then leverage various other capabilities offer by BizAPP to:

- Define enterprise business policies leveraging information sourced from different solutions, such as SLA enforcement.
- Define process which span multiple functional boundaries, e.g. Return Material Authorisation process which spans across CRM, Claims Management, Replacement Management, Service management, etc.
- Create mash-up business portals and reports which offer higher levels of visibility to information for decision makers.
- Extend the capabilities of point solutions by way of web enabling, SOA enabling, increased audit, increased rules-based security, etc.

### *Advantages Offered by Model Drive Approach to Exposing Information*

BizAPP's model-driven virtualisation approach while forming the basis for establishing enterprise process management infrastructure also enables organisation to leverage existing investment made on tools, skills developed and knowledge gained. Furthermore, model-driven approach eliminates the need

for extensive programming, reducing time to develop or change and hence cost associated with these.

## **Case Study**

Following case study highlights a real life scenario of organisations deploying BPP to address some of their automation and process management needs, and the benefits derived:

### ***Return Material Authorisation Platform for a Large Retail Chain***

The client is a large retail chain with over 500 stores across UK. Client had deployed a SaaS-based CRM solution from SalesForce.COM and was using a hosted claims management solution offered by a leading insurance provider. End customers of the retail chain use SalesForce.Com to submit their request for replacement of material they would have bought from any one of the 500 outlets.

A dedicated support team at the retail chain to manually review and apply warranty policies on each of the requests being submitted in the CRM system before routing the same to the claims management system being hosted by the insurance company.

#### *Business Problem*

Lack of integration between the claims management system hosted by the insurance company and the SaaS-based CRM solution, resulted in

- Duplication of data and manual synchronisation of data between CRM solution and the claims solution.
- Loss of data integrity and customer satisfaction due to delays in manual processing of requests.

#### *Solution Implemented*

While the real problem being targeted was to integrate the SaaS-based CRM system with the hosted claims management solution and to automate all of the manual processes involved, solution delivered went beyond leveraging the capabilities offered by BPP such as:

- Rules-based SLA enforcement to enforce and monitor timely response to customer requests,
- Proactive Notification and reporting system keeping concerned individuals informed at all times,
- An integrated process management portal allowing users with appropriate authority to monitor and take corrective actions where necessary.

*Benefits Derived*

Solution delivered not only increased ROI on customer investment on their CRM and claims management system, but also delivered following key benefits:

- Reduced claims inventory,
- Over \$100 K in direct savings per month,
- Improved customer satisfaction with rapid response system,
- Support personal being redeployed on core activities.

Other key highlights of the solution are:

- Leveraging model-driven capabilities offered by BizAPP, solution was developed in a matter of 4 weeks,
- Solution was delivered on a SaaS model making it one of the world’s first true Integration-as-a-Service solution.

Having implemented the solution using a comprehensive platform like BizAPP, client can now further extend the solution to integrate its distribution and supply-chain processes and do so without any additional investment on tools. Fig. 1.5 shows a cost comparison between the traditional approach and approach enabled by BizAPP.



Fig. 1.5. Traditional Approach Versus BizAPP Approach.