

Enabling Business-Driven Automation for Business Advantage

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Executive Summary

Challenge

Today's businesses demand more from IT than ever before. IT is expected to help the business innovate and grow, regardless of the difficult economic times. The IT organization is under constant pressure to reduce its budgets and deliver results. IT executives must constantly find innovative ways to cut costs and improve service while minimizing the risks to the business.

Opportunity

Automation is a key tool in a CIO's arsenal to help an organization get lean — that is, maximize the value provided to the business at the lowest cost. Automation is the heart of Lean IT and expanding its use in the management of IT operations can enable a truly agile and responsive IT organization. By deploying effective management software solutions and automating processes to reduce complexity and increase efficiencies, organizations can achieve the goal of delivering quality service to the business at the lowest cost.

Benefits

Business-Driven Automation (BDA) enables IT to reduce costs and increase agility and service quality by enabling dynamic, real-time response to changing business demands — allowing IT to respond at the speed of business. BDA reduces risk and human error by automating complex processes. BDA minimizes costs by optimizing the utilization of physical and virtual assets. This provides increased agility and reduces unnecessary CAPEX outlays and OPEX costs. BDA also allows IT staff to work on more strategic projects by automating many of the labor-intensive tasks involved in deploying, configuring and managing the resources that support business services.

AUTOMATION: INCREASING THE EFFICIENCY AND EFFECTIVENESS OF IT

IT can employ automation as a means to elevate its operational effectiveness and better align itself to support business needs. Automation already occurs in varying degrees throughout the management of IT in the enterprise. However, many additional opportunities exist to automate the management and delivery of IT services, which can help further contain costs, assure service, increase agility and reduce risk.

Automation is the cornerstone to increasing an IT operation's efficiency and responsiveness to business needs and opportunities. In addition, automation reduces business operational risk by enforcing consistent, controlled delivery of quality services to business users and customers. Automation helps reduce staff costs, improve service delivery times, increase IT's ability to meet service level agreements (SLAs), and enables tighter alignment between IT and the operation of the business.

Effective IT Is Business-Driven Automation

Business-driven automation (BDA) is the optimal stage in an organization's IT maturity, wherein IT can manage to business value and operational risk, realizing the higher efficiencies and cost benefits of IT automation. BDA provides customers with the ability to prioritize their automation investments in alignment with the needs of the business. The automation maturity model (Figure 1) can assist organizations in identifying their current state in conjunction with the building blocks of BDA, providing a path, as well as gains in business value, each step of the way.

Increased Business Value Through Automation Maturity

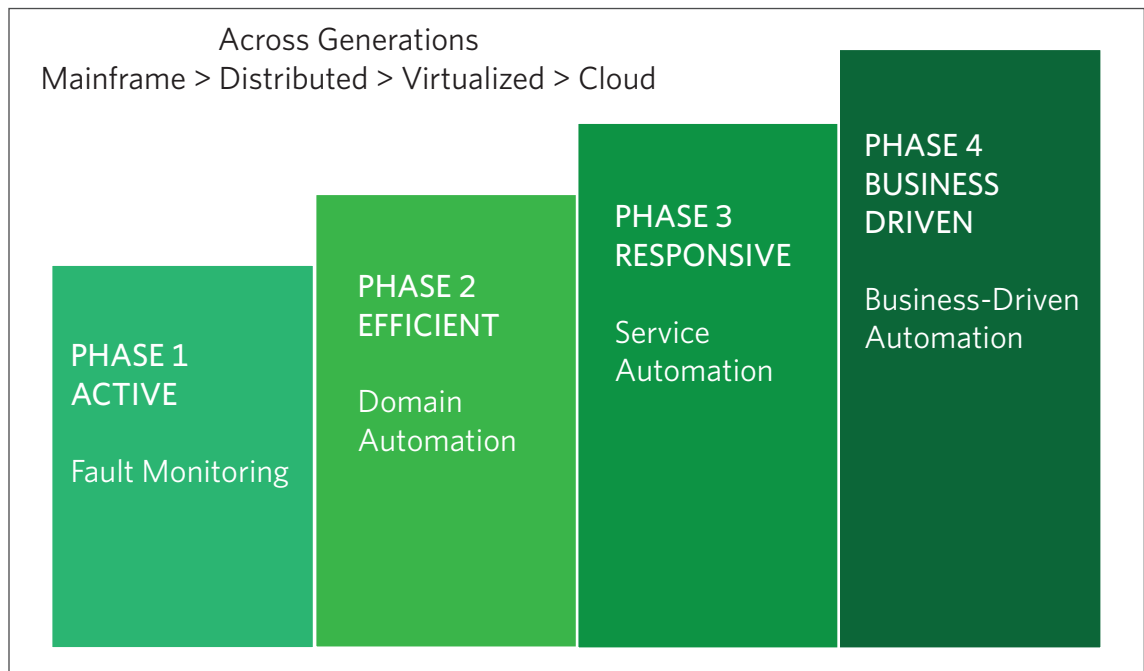


FIGURE ONE: BDA MATURITY MODEL

Phase 1 / Active: Fault Monitoring

This phase represents the ability to actively react appropriately to issues, incidents and faults that occur within a domain of technology or expertise, e.g., network monitoring. At this phase IT is effectively monitoring and able to recognize events that may lead to service outages. This phase is characterized by domain experts responding to events on a case-by-case basis, leveraging fault and event management to guide them to resolution. The domain specialists work in their individual silo. If a business unit reports service failure or performance degradation, several handoffs to different specialists/silos may be required to resolve the incident.

The **business value** is demonstrated through reduced business impact of service outages due to accelerated fault detection and resolution.

Phase 2 / Efficient: Domain Automation

Building from the capabilities in phase 1, phase 2 automation improves IT's ability to identify and diagnose a problem with the addition of an automated response. However, automation is still limited within the technology domain. An example of automation at this stage is workload automation, because when jobs are scheduled with dependencies, workload automation insures that the necessary actions are executed in the appropriate sequence. Workload automation is implemented as a cross-platform scheduling solution that reduces operating costs by controlling and directing both scheduled and event-driven business workloads from a consolidated view.

It is also appropriate to implement a flexible, open and cross-domain IT process automation manager during this phase. IT process automation delivers the ability to design, develop and deploy automated process flows that streamline and transform management of routine, manual and labor-intensive tasks.

The **business value** is demonstrated through the reduced business impact of service outages by automatically fixing the root cause of a problem, as well as reducing the cost of service delivery by automating labor-intensive tasks. Automation at this phase can also result in better data center resource utilization.

Phase 3 / Responsive: Service Automation

The responsive phase brings automation to a greater level of maturity through “service automation”, managing and automating in context to the business service.

This phase includes Service Assurance — visibility of a complete IT service from the infrastructure all the way to the end-user. Service Assurance provides both an end-user's view of the performance of a service with various detailed views of infrastructure components that make up the service. Service Assurance allows IT to anticipate potential problems and to take action prior to end-user impact.

Exposure to unwanted risk related to incorrectly configured components is mitigated through automated monitoring and management of system configurations based on corporate standards.

The **business value** is demonstrated by ensuring that service levels are met through automated assurance of service performance and availability, increased business agility by automatically provisioning services on demand, and reduced risk through automated monitoring and management of system configurations based on corporate standards.

Phase 4 / Business Driven: Business-Driven Automation

Business-driven automation is the ability to automate in context to business priorities by leveraging new and existing IT investments in mainframe, distributed, virtual and cloud computing environments collectively to gain efficiencies, enhance productivity and maintain competitive advantage.

Through BDA, the **business benefits**, with greater alignment of automation efforts being directed by business priorities, delivering the greatest economic value. Also, IT risk mitigation efforts are prioritized by business operational impact.

Automation Maturity Use Case

Organizations that are in **phase 1** of the Automation Maturity Model (Figure 2) typically have deployed and realized value from an implementation of infrastructure and application monitoring tools. Maturity at this phase is characterized by proficiency in identifying and reacting to event-driven alerts for applications, systems and network elements.

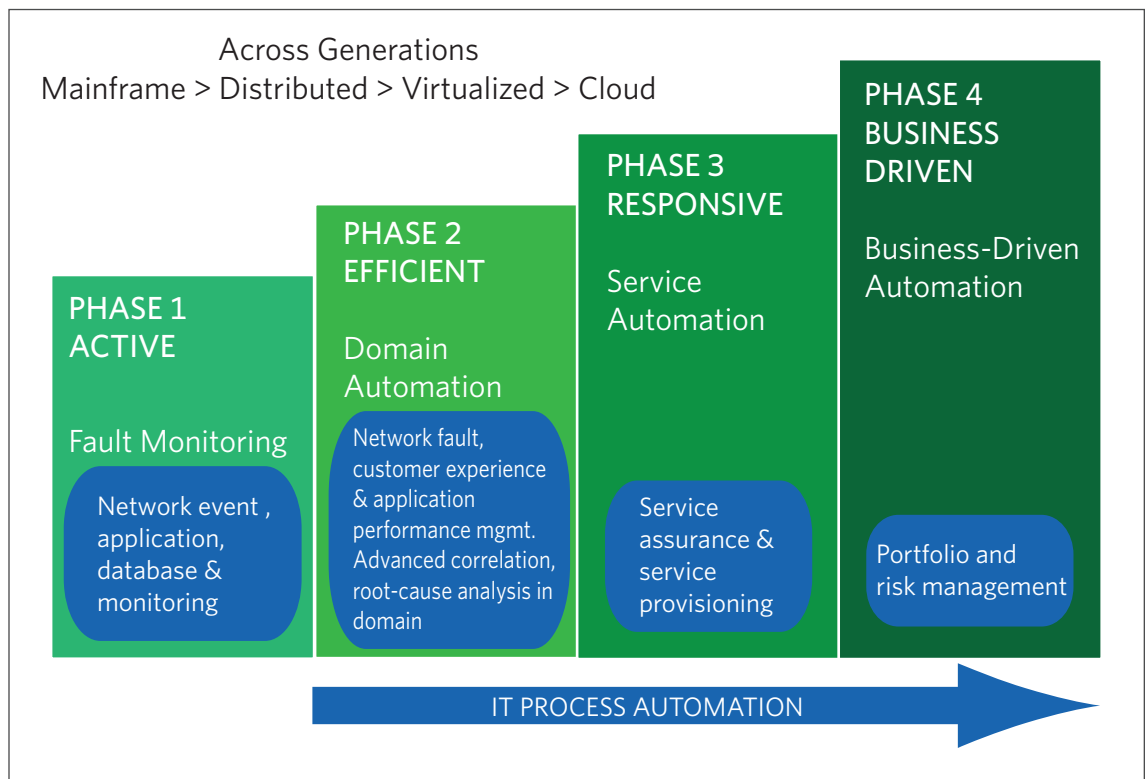


FIGURE 2: AUTOMATION MATURITY MODEL: USE CASE

In **phase 2** the organization is able to realize greater insight into the root cause of system, network and application performance problems and can quickly triage and remediate through informed human response. Without this root cause analysis, an event storm — in which a failing component causes other events to be generated downstream — could result in hundreds or thousands of incidents. In phase 2, incidents are automatically created and recorded in the Service Desk, an ITIL® best practice.

Automation is beginning to be more effectively leveraged at this stage, within a domain. For example, a network fault management solution is effective in identifying and diagnosing the root cause of issues that impact network performance and the specific group responsible for that component can be notified. Automated response at this phase can include the ability to dynamically allocate resources through physical and/or server virtualization accompanied with a streamlined change and configuration management process.

Through IT process automation, IT operations can now capture and coordinate their organization's experience, knowledge and activities in a comprehensive, step-by-step process flow, allowing IT to begin to break down the barriers of siloed IT management domains and drive automation and maturation of ITIL® best practices.

The organization is also able to ensure that the end-user experience is not impacted by capacity problems. System and application discovery is used to map the application infrastructure configuration (enabling informed automation). Now when a performance issue is detected, the necessary resources are provisioned across both virtual and physical environments, ensuring that the end-user experience is not impacted.

In **phase 3** the organization is managing the service through SLAs to assure the service is available and performing to production specifications. Automated responses, driven by policy, manage to SLAs and are able to provision resources as required and resolve failing infrastructure faults. Entire services can be automatically provisioned through service requests to the service catalog. System and application provisioning is utilized to provision the entire application and all necessary infrastructure. This key information and insight is then available to a data center automation policy engine, which can automatically provision additional resources on demand based upon SLA requirements and business policy. Managing cross-domain and cross-platform IT components in context to the defined business service ensures service levels are met through automated assurance of service performance and availability. Increased business agility is achieved by automatically provisioning entire services on demand. Informed automation plays a large role in this phase by combining a set of infrastructure and application performance metrics and configuration information with a rules-based policy engine to proactively and dynamically respond in real time to business needs. Again, IT process automation management is being continually leveraged to drive process efficiencies, automate workflow and ensure business alignment.

Phase 4, Business-Driven Automation, is the holistic approach of managing the entire business value and operational risk of services. The organization can prioritize the automation of services based upon their value to the business by leveraging a flexible and highly automated IT operation. With true business-driven automation, IT can review its existing portfolio of services. They can evaluate which are high-value services, how the business is consuming the services, how expensive they are to support and maintain, and which services have the highest impact if they fail, and if any of those services are not meeting their SLAs. IT can then make decisions on which services to focus their automation efforts on, and where to invest in new technologies like virtualization, based upon their value to the business.

Conclusions

Today's economic conditions are forcing organizations to become leaner. There are very few things CIOs can do which help them improve efficiencies and "get lean" in addition to helping improve the quality of the services provided to the business. IT must transform itself to become an efficient and value-driven asset to the business. Business-driven automation is an innovative approach to delivering extensible value by aggregating and streamlining:

- IT processes/workflow
- Provisioning and Change Control
- Workloads
- Service Assurance

Business-driven automation is a vision and a roadmap for achieving increasing levels of automation, which lead to:

- Increasing resource optimization
- Controlling costs
- Reducing risk and human error
- Increasing IT responsiveness and control
- Delivering quality services

About the Authors

Ben Scheerer, Senior Principal Product Marketing Manager for CA, Inc. has more than 17 years of industry experience, which has run the course of sales to pre-sales, consulting and product marketing, Ben's experience with enterprise IT management-has helped businesses better align their goals for improving service while reducing costs. Ben's contributions outside of CA include numerous speaking engagements, published articles and white papers on IT management related topics. Ben holds a BBA in Marketing from Western Michigan University and a Master's degree in Computer Information Systems from the University of Denver, and is ITIL V3 foundation certified.

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About CA

CA (NASDAQ: CA) is the world's leading independent IT management software company. With CA's Enterprise IT Management (EITM) vision and expertise, organizations can more effectively govern, manage and secure IT to optimize business performance and sustain competitive advantage. For more information, visit ca.com.