Digital Transformation Technologies
Getting the Most from Transformation
Abstract

Digital Transformation and Technology – What you need to know

The Coming Wave of the Intelligent Enterprise

Proper selection of digital technologies provides the acceleration into the future needed by organizations today. Understanding what technologies are available and where they might be applied in an orderly and efficient manner is significant to successful transformation today.

With all the variable consideration about digital technologies, how do you choose which ones to invest in and apply to your organization? It is important to know what digital technologies are available. Further, how do you make sure the value and usability of each are well understood for the application you have in mind?

Digital Transformation – The Opportunity View

Identifying the likely needs for digitization is a good starting point but how do you do this? Where do you start? Should you look at what everyone else is doing or develop a plan specific to your organization needs? Maybe you need a mix of both plus some insight into where the technologies are going. Are they evolving into easy to use features, more sophisticated ~~features.~~features? Do they require hard to hire and complex skills to apply?

Digital Transformation – The Technology View

Which technologies are available out of the box? How do they match with your needs as an organization? Are point solutions a good way to go or should we use and integrated technology approach? Moreover, surveys of executives consistently indicate that digital analytics are key to successful application of these technologies. These analytic flows are not the same as BI analytic flows. How do they differ?

A Useful Solution to Digital Technology Use

The Intelligent Enterprise was conceived several decades ago but there was little technology available to make it happen. Today we have a flood of technology and the challenge is to effectively use it for best results in an organization.

This course is for managers and professionals seeking to gain skills in digital transformation management decisions. Digital analytics enable supporting, augmenting and in some cases replacing humans in decision making.

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Day One

Day 1 Theme: The Drivers of Change and the Need

Organizations do not control technology evolution or change. An organization can anticipate change or react to the change when change is presented. Both techniques work. The most effective approach is to do some of both. In order to do that you need to know how to identify potential technologies, their impact on the economy, the industry and your organization. *Here is an approach to do just that*.

Section 1 – The Technology Wave – A Push from Capability

- What are technology waves?
- How do they impact an organization?
- Understanding the impact of technology
- Assessing the degree and need for change
- The technology impact assessment

Demo: Assessing the Impact of Technology

Section 2 – The Organization Need – Pull from Issues Facing Organizations

- Key management issues today
- Needs drive what technologies are needed
- Operational needs
- Strategic issues
- Tactical issues

Video and Discussion: The Impact of Technology on Organizations, Society and Countries?

Section 3 – Technology Forecasting – Anticipating Change

- Preparing a forecast
- The technology plan
- The proactive approach
- The reactive approach
- Technology and change management

Case Study Activity Part 1: Identifying Technology Sensitivities

Exam 1 – First Day.

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<u>Day Two</u>

Day 2 Theme: Integrating Technology into the Organization

Understanding the application of digital technologies starts with creating a digital twin of the organization. While this may sound strange and difficult, many of the pieces exist in organizations today as process, data, document management taxonomies, document meta data models and other models that resulted for long term automation efforts. The key to efficient digitization is integrating these models and exploiting the relationships to understand the points of digitization. Today's material shows how to integrate that material into an integrated view of the organization through models that are then used for digital transformation.

Section 4 – Strategic Technology – Impacting Direction of the Organization

- Using the results of a technology forecast
- Identifying threats and technology risk to the organization
- Assessing the risk of technology change
- Identifying the technology change impacts on strategies
- Ranking the technology results

Video: Strategic Impact of Technology

Section 5 – Tactical Technology – Impacting the Structure of the Organization

- The digital twin of the organization
- Integrating digital models
- Assessing the strategic impact on organization structure
- Identifying digital technology opportunities
- Ranking the opportunities

Demo and Discussion: Discovery of Technology Opportunities

Section 6 – Operational Technology – Changing the Execution for Success

- Process based technologies e.g. RPA, Workflow, Decision Analytics
- Document based technologies
- Management based technologies
- Decision technologies
- Issues in integrating technologies

Case Study Activity Part 2: The Scope of Technology Impact

Exam 2 – Second Day.

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Day Three

Day 3 Theme: Applying Digital Technology for Customers

Customers - whether in a business or as government citizens - should be served in a friendly and efficient manner. Customers are the contact point between the organization and its external environment. Further, customers provide needed data for improving your relationship to them Customers often do not see or understand the amount of 'under the covers' effort such as easy to use workflows that support their interaction with the organization.

Section 7 – The Prime Contact Point – Customer Service and the Chatbot

- Chatbots today – the state of chatbot progress and use
- Designing a chatbot
- Deploying a chatbot
- Tuning the chatbot
- Improving the chatbot
- Evaluating the value of chatbots

Exercise: Understanding Chatbot Use

Section 8 – Customer Workflow – The Quiet use of Technology

- The technology trend in workflow
- Moving workflow to the customer
- Different types of workflow today
- Business Intelligence – The Tracking workflow
- Digital Transformation and Management – The Insight workflow
- Process Management – The Value Stream workflow

Video and Discussion: The Changing World of Customer Relations Through Technology

Section 9 – Securing The 360 Customer View – Using Blockchain for Security

- 360 – the complete view of a customer
- Knowledge and data about the customer
- Assuring customer privacy and security
- GDPR and the customer

Case Study Activity Part 3: Mapping Technology to Opportunity

Exam 3 – Third Day.

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Day Four

Day 4 Theme: Transformation Technology for Operations

The greatest value of digitization comes from applying digital technology to operations. Value chain analysis and matching analytics expose the points of application for digital change. This requires a model type of understanding of the operations typically done with process, data and decision models. Models provide a simple cost-effective approach such that change can be tested and assessed before major modifications are made to operations. The three technologies described below are best implemented when a digital twin of the organization exists as a test bed for the digitization ideas.

Section 10 – IoT – Digital Technology at the Edge

- The rapid growth of input at the edge
- IoT and operations
- What are the types of IoT?
- Smart operations – Binary analytics on sensors
- Watching the Edge - The IoT digital management dashboard

Exercise: Where to Start the Digital Effort

Section 11 – RPA – Digital technology in the process

- Intelligent process and robotics
- The rapid change to RPA
- Service versus Product RPA
- Product RPA today – Custom versus out of the box
- Robotic Decision Making - Decision analysis digital technologies

Demo: Digitization and the Manager – Leveraging Decisions with AI

Section 12 – Semantic Analysis – Digitizing Document Input

- The document management issue today
- Document access technology
- Document input technology
- Document meta data technology – Search and analytics

Case Study Activity Part 4: Points of Digital Transformation

Exam 4 – Fourth Day.

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Day Five

Day 5 Theme: Transformation Technology for Supply Chain

Both product and service organizations have a supply chain. They may operate differently and focus on different resources, but they are supply chains just the same. Digital transformation technologies that apply to the supply chain are focused on security, correctness, timeliness and reliability.

Section 13 – Logistics – Digitizing the movement of goods and services

- The internet of thing (IoT)
- Drones
- Autonomous vehicles
- Customer access
- The digital transportation infrastructure

Video and Discussion: Digital Logistics

Section 14 – Managing Inventory

- The digital warehouse
- The digital data warehoused
- Statistics versus Machine Learning versus Neural nets
- Data analytics for inventory resource management
- The logistics impact

Video: Digital Resource Management

Section 15 – Delivering Resources to the Point of Use

- Physical movement
- Electronic movement
- Anticipating need – Digital Forecasting and Prediction
- Remote and mobile inventory moves
- Autonomous delivery

Case Study Activity Part 5: Monitoring the Technology Plan

Exam 5 – Fifth Day.

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Learning Objectives

Some digital technologies are simple and some are complicated, some require extensive development and customization and some work out of the box, some have been available for many years and some have recently emerged in the marketplace, Some are statistically oriented, some AI and some are simple arithmetic ratios. This course gives you the background to sort out which technologies to use for effective digitization across the organization.

After completing this course, you will be able to:

- Describe the key digital technologies available today
- Explain why it is important to track technology evolution and innovation
- Describe the components of a good digital technology plan
- Analyze the end to end impact of digital transformation
- Define how the digital technologies and transformation can become reality
- Identify the state of automation and how processes are impacted
- Describe some of the most applicable technologies to transformation.
- Explain the key factors for successful digital technology transformation
- Define and specify a prioritized approach to technology evolution
- Demonstrate different digital transformation waves and how they impact the organization
- Prepare a meaningful digital technology transformation plan for the organization

Some of the technologies for digital transformation discussed in this course include:
- IoT – Internet of Things
- Chatbots
- Artificial Intelligence/Neural Nets
- Machine Learning
- Robotic Process Automation
- Analytics
- Augmented Reality
- Digital Twin
- Mobile Access
- Autonomous Operation
- *Also included are some Industry Oriented Digital Technologies*

Who should attend?
Business process teams, Business planners, Process Analysts, Managers, Professionals, IT Specialists, Business Analysts and IT and Business Architects.

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