Making Robotics a Reality

White Paper

Key Findings

The following five steps are fundamental to effective governance of robotics efforts:

1. Centralize robotics governance.
2. Define key robotics-related roles.
3. Stay on top of new opportunities and evolving technologies.
4. Manage the people side of robotics.
5. Track performance and impact.

Step 1: Centralize Robotics Governance

For many organizations that are newly experimenting with robotics, the interest in robotics likely grew organically, starting on some individual team in some line of business or possibly even in multiple places across the company. Different teams working on robotics may or may not have even discovered each other. Such start-up robotics teams that have gained experience in supporting initial business cases, pilot tests, and proofs of concept can be capitalized on as a resource to educate and expand robotics further throughout the organization. If the organization wants to expand the use of robotics, it makes sense to centralize to execute the new ongoing governance activities required to make the most of the robotics opportunity. There are two approaches to centralization: robotics as a shared service, and robotics as a separate center of excellence.

A center of excellence or shared service model offers the best approach to centralizing the required resources, processes, and expertise.

Robotics as a Shared Service

Robotics as a shared service can be a useful way to educate and introduce robotics across the organization. It can also help to identify opportunities and implement robotics for internal customers across the company.

Robotics as a Separate Center of Excellence

A “center of excellence” or “center of expertise” refers to a team that provides a single type of service or support that is complex enough to require a certain level of expertise. Robotics is a prime candidate for consideration of this model to create a place to organize resources that anyone in the organization can use.

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Step 2: Define Key Robotics-Related Roles

When most companies first explore robotics, they set up a small team to research and understand the potential opportunity. This initial robotics team presents a safe approach to the technology, as most companies can spare the workload of a few individuals without major disruption to their course of business. The team gathers information, creates initial opportunity assessments, and pilots test projects. They gain an immense amount of information and experience in a short amount of time. Effective governance ensures that the rest of the enterprise takes advantage of the resources and lessons learned from initial robotics teams.

The robotics leader is the source of education and information about robotics for the entire enterprise.

Identify a Single Robotics Leader

Governance for robotics starts with a well-articulated vision for deployment and a plan for achieving it. As part of the vision, companies need a single leader to successfully organize robotics efforts across the company. This person will lead the robotics initiative, including the development of robotics governance. The robotics leader serves as the face of robotics for the enterprise and is responsible for managing and reporting all work related to robotics implementation. He or she organizes the development of the roles, operations, and processes associated with robotics and makes sure that all work aligns to the predetermined vision and strategy. Further, the robotics leader is the source of education and information about robotics for the entire enterprise. This leader does not need to sit in the IT organization.

Delineate Other Robotics Roles

To effectively roll out robotics across the organization, it is important to assign responsibilities for robotics development, control, and maintenance across a variety of roles. Even if they are not full-time roles, it is important to articulate and assign these responsibilities. Specifically, three key roles ensure the successful enterprise-wide deployment of robotics:

Robotics Programmer

- Responsible for initially configuring the robotics technology
- Can be an individual whose work is being automated, or just someone who works closely with those individuals to develop the automated solution
- Over time becomes familiar with robotics capabilities and develops knowledge of robotics solutions and tools

Robotics Controller

- Responsible for both monitoring the progress of the robotic solution and ensuring the accurate execution of the automated process
- Must have a deep knowledge of the robotics solution as well as the intricacies of the work being automated
- Must be able to spot any problems with the solution and identify any opportunities for improving process execution

Robotics Analyst

- Responsible for identifying new opportunities to apply or embed robotics across the organization
- Must be very familiar with the capabilities of robotic solutions
- Works closely with the robotics leader to define the requirements that make a process an ideal candidate for automation

Step 3: Stay on Top of New Opportunities and Evolving Technologies

Organize a central collection of robotics resources to share knowledge across the enterprise

Establish Processes and Tools for Spotting and Prioritizing Robotics Opportunities

As companies expand robotics beyond the scope of initial pilot projects, they need to develop a methodology, process, and tools for determining if a process or activity is a good fit for robotics. The initial robotics team should create a set of criteria and build a process to source, capture, and prioritize opportunities for robotics.

Establish a Process for Sharing Robotics Knowledge

The initial robotics team is usually tasked with collecting and analyzing all of the available information on robotics. The learning process includes general information about robotics, the different types of technology, and specific vendor capabilities. The best way to avoid the redundancy of this effort is to organize a central collection of robotics resources to share knowledge across the enterprise.

Build a Process for Staying up to Date with Solution Enhancements

As with any technology, there will be new and improved versions of the product. Solution providers offer different types of automation technology, and most plan on evolving the capabilities of their solutions over time. Good governance includes a periodic review of new requirements against the specific technology capabilities and development plans of solution providers and the new technologies expected in the coming years.

Step 4: Manage the People Side of Robotics

Develop more employees with robotics skills to more cost-effectively deliver on robotics opportunities

Ensure Robotics Change Management

Beyond communication of plans, processes, and results to corporate management, other stakeholders must also be informed about the deployment of robotics. Employees are often concerned about the implementation of robotics because of the negative perception that comes with job displacement. Thus, it is critical to provide clear change management information to internal employees about the strategy and use of robotics. Whether the strategy includes reduction in head count or redeployment of human labor, robotics leaders need to ensure the change management action steps are in place.

Develop Training Programs for Robotics

As more and more processes are automated, robotics leaders should provide adequate training for employees whose work will be programmed into the robotics solution. Training opportunities can be related to developing robotics support skills and other more value-adding activities. When programming the automated work, employees can partner with a robotics programmer or learn to program the robotics software themselves. Many vendors offer solution-specific training and tutorials as well. Advisory and consulting firms offer free white papers and other literature on the future of automated work. By developing more employees with robotics skills, organizations can, over time, rely less on external support from vendors and consultants. This independence will allow organizations to more cost-effectively deliver on robotics opportunities.

Step 5: Track Performance and Impact

Establish processes for evaluating and reporting how much efficiency improves as a result of system automation

Establish a Process for Evaluating Process Performance

After automating a new process, it is critical to check the quality and accuracy of the automated work. This quality assurance includes a review that ensures the work was done according to the programmed process and without errors. The review is best completed by the individuals responsible for the original work as well as the person responsible for programming the automation. For organizations that can staff a full-time robotics controller, the ongoing reporting and review of robotics and process performance would fall under the scope of that role.

Establish a Process for Reporting Progress and Results

Business leaders require an ongoing way of monitoring the success of robotics implementation. To accommodate this need, organizations must first measure the current state or baseline performance using efficient output with human operation. This measurement shows the effective "before" state of automation. Once the process is successfully automated, the updated output can be compared to the original performance to measure the efficiency improvement.

Resources to Aid in Robotics Implementation

We are committed to helping our clients understand the robotics landscape and the use-case scenarios in which they should consider this new form of automation and other machine learning solutions.

In short, we will help you navigate through these fast-moving but very important technology developments that may revolutionize procurement & operations and its potential.

Resources will include:

- Roundtable discussions on robotic process automation (RPA) reserved exclusively for heads of procurement & operations,
- Written profiles/virtual demos of RPA solutions,
- Mini case studies of companies in various industries, enabling you to draw comparisons with peers, and
- White papers, tools, templates, and methodologies.

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