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**Understanding the challenge of implementing your virtual workforce**

Robotic Process Automation as part of a new social-technological paradigm

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# Understanding the challenge of implementing your virtual workforce

Robotic Pocess Automation as part of a new social-technological paradigm

Why do most Robotic Process Automation (RPA) projects experience difficulties when trying to move beyond the Proof of Concept or Pilot phase? The answer to this question lies in the fundamentally different implementation approach that is needed in order to embed RPA into the organizational structure rather than the approach that is traditionally used when implementing new technologies. RPA implementations can happen through fast development and with high involvement of the business, not just from IT. Therefore, it is key to take a holistic change management approach that is focused on closely aligning people, processes and structure.

### Introduction

More and more businesses are moving towards digitization. Part of this effort is the desire to automate (parts of) certain business processes. However, overloaded IT departments are often not equipped to handle all of these needs in a timely and cost efficient manner. This creates a long tail in the automation backlog that is not addressed, consisting of many smaller IT requests that could lead to high efficiencies in the business. Robotic Process Automation (RPA) is a software-based solution for automating processes, in which a (virtual) robot script mimics human actions within existing applications. This solution is especially well-suited to perform activities that require handling large quantities of (structured) data and interacting with a number of different IT systems that are currently being performed manually. Many

companies have already experimented with RPA and validated the added value of the technology through Proof of Concepts (PoC). Currently however, they are facing challenges with roll-out and the scaling of RPA throughout the whole organization.

### Distinctive RPA characteristics

RPA is intrinsically different than traditional process automation solutions, e.g. Business Process Management Systems (BPMS) and in-system solutions, due to two main distinctive characteristics.

#### 1. RPA operates on the user interface layer

RPA software requires no back-end integration with existing systems or databases, because it uses the existing logic of applications and

interacts with them as a human user would. Traditional solutions often require tailor-made connections between systems in order to automate a specific process. Although this is a more robust solution, it greatly increases the complexity of the IT landscape and consequently it increases the IT maintenance costs as it requires specialized IT knowledge.

#### 2. Easy configuration for non-IT users

RPA is relatively easy to configure. Configuring the robot resembles the modeling of processes, instead of programming a piece of software. Therefore, tech-savvy employees can be trained in only a few weeks to configure RPA, whereas specialized, and thus more expensive, knowledge is required for the traditional process automation solutions.

## Not just a new technology, RPA creates a new paradigm

Due to the two main distinctive characteristics that were just described, RPA is a more flexible and a cheaper solution than traditional process automation solutions. The rise of these types of technology is part of a wider trend, as is mentioned by Bygstad (2015). He identifies a whole new generation of cheap, flexible, and relatively simple IT solutions that he calls "lightweight IT". This generation also includes mobile, cloud, and business analytics applications. Lightweight IT is classified by Bygstad as "a socio-technical knowledge regime driven by competent users' need for IT services, which is enabled by the consumerization of digital technologies". In contrast, heavyweight IT represents the traditional systems and databases, which focus on systematic integration throughout the IT landscape.

Bygstad acknowledges that the cheapness and simplicity of lightweight IT is not the most important aspect of this trend. Instead, this new paradigm affects the whole socio-technical configuration of the organization, as technology and its surrounding organizational context are always intertwined. In the case of RPA, the characteristics of the technology make it possible that the business initiates small-scale Proof of Concepts and Pilots instead of IT where traditionally business automation solutions are regulated. However, when attempts are made to roll-out the new technology to other parts of the organization, this lightweight IT solution runs into the current organizational structure.
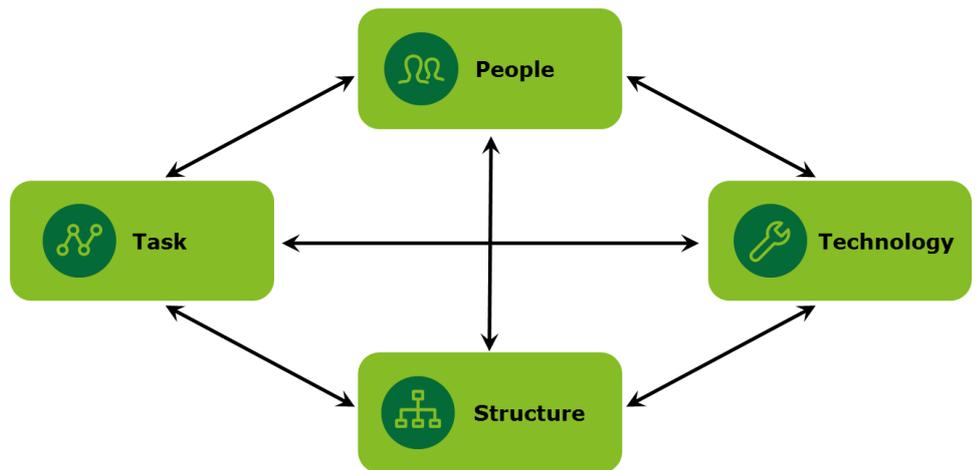


Leavitt's Diamond representing organizational systems. Adapted from Leavitt (1965)

### Organizational structure

Organizations typically make a set of consistent choices on how to carry out organizational processes and how to achieve goals. These choices can be divided across four elements: people, tasks, technology, and structure (Leavitt, 1965). These elements are interrelated and keep each other in balance when processes are carried out. In many organizations, these elements are configured towards heavyweight process automation solutions. Consequently, a lightweight IT solution such as RPA and its new possibilities does not fit the existing structure. This could be a barrier to the full implementation.

### Organizational difficulties to overcome

In order to embed RPA into the organization, organizations need to overcome two major risks caused by their current organizational structure.

### 1. Separation of business and automation responsibilities

Traditional, heavyweight IT automation solutions are typically implemented and governed by IT. Currently, RPA Proof of Concepts are often initiated and configured by the business, with limited involvement from IT. However, when moving beyond the PoC, the project requires IT knowledge for tasks such as hosting, governance support, security, scalability, and assurance of the RPA solution. Business knowledge is also still required for tasks such as identifying the right processes, modeling these processes, and setting the vision for the technology. This means that roles and responsibilities for governing and controlling RPA are shared between business and IT, and this contradicts the existing separation in most organizations. The need for ongoing business and IT alignment calls for new alignment mechanisms and this can make an enterprise-wide roll-out more challenging.

*"Unlike normal technology projects, this project was led by the business instead of IT. This created insecurities in how to organize and communicate, so we needed a different approach"*

- RPA lead, Danish Insurer

## 2. Enterprise-wide approach and support

When implementing a traditional, heavyweight IT automation solution, an enterprise-wide, consistent approach is used because the solution affects many other organizational systems and processes. Absence of this approach means running the risk of local, ad-hoc automation solutions where no end-to-end enhancements are achieved. Therefore, all stakeholders are involved and have accepted the solution and the added benefits it will bring before it is implemented, creating organizational support.

Because RPA is a more flexible and lightweight solution, it can start on a small scale within one operational department. The implementation project is often only communicated within that department and the initial project requires limited management support. As a consequence, RPA only makes a small, local impact in the beginning. Demand for RPA in other departments is not self-evident and the added value for the organization does not immediately become clear. This limited visibility of the technology and the added value can lead to limited organizational support and acceptance of the solution, hindering an enterprise wide roll-out.

### A holistic change approach for implementing RPA

In order to overcome the two major difficulties that were just discussed, it is important to employ a holistic and consistent change approach. This approach should not only address the changes in technology, but also the changes in people, tasks and structure. Combined research by Deloitte and the Radboud University on critical success factors for the implementation of RPA has shown that the most important factor is the acceptance of the technology among all different stakeholder groups in the organization. In order to

establish this, organizations need to focus on three areas.

### 1. Establishing continuous alignment between business and IT

As we have seen, a major difficulty to overcome is the current separation of business and IT responsibilities. In many cases, RPA has been initiated by the business with limited involvement from IT. Involving IT when the PoC has already taken place could lead to frustration, insecurity and a skeptical view on the new technology and its adherence to security and compliance requirements.

In order to roll-out RPA in the organization, technology acceptance for RPA needs to be created among IT staff. It is therefore important to show the added value of RPA to IT, i.e. how it can extend the process automation portfolio and unburden IT rather than fully replace existing solutions. Also, communicate clearly what the scope of the project is and address any security concerns they may have. Finally, involve IT from the beginning so they are more aware of the technology and how it meets the needs of the business.

In addition, a new distribution of roles and responsibilities need to be cleared out to create a shared understanding between business and IT. It is important to note that this is not a one-time event, but ongoing alignment is needed. So, ensure business and IT can find and understand each other on a continuous basis by embedding an alignment mechanism in the organizational structure. One way to achieve this is by creating a competence center with a team consisting of both business and IT, led by a dedicated manager from the business. This central coordination of RPA efforts will also help to increase the next focus area: organizational support.

## Case example 1: a Danish insurer

A Danish insurance company started experimenting with Robotic Process Automation in January 2016. One year later, they were still unable to deploy a robot to carry out processes. There were three factors that held back the implementation.

1. Top management support was lacking in the beginning, which led to confusion and indecision regarding IT resources.

2. There were no IT capabilities included in the RPA team itself, and the IT department was uncooperative due to miscommunications and wrong expectations.

3. The impact of the implementation for employees was underestimated as the company has a quite old-fashioned organizational culture.

To overcome these struggles, they appointed a dedicated manager, to sort out the allocation of resources. They worked on building mutual trust between Business and IT by dialogue and aligned their needs and demands. Finally, they realized the importance of good enterprise-wide communication concerning the new initiative and the consequences it will have for employees.

In 2017 they were able to overcome the obstacles and in June 2017 they brought their first robot live in production.

## 2. Create organizational support

In order to overcome the second major risk mentioned previously, it is important to generate technology awareness and acceptance among key members of the organization,

leading to support from the organization. This support needs to come both from top management and from the employees impacted by the new solution. Especially C-Suite level sponsorship for the project shows RPA is becoming a tool of significant value to the organization. Also, after full implementation the robots will be part of the organizations' workforce, so senior management has to take ownership of these additional resources. In order to achieve this, early involvement of stakeholders and clear communication to everyone in the organization are required. It is key for the enterprise-wide roll-out that everyone in the organization is aware of the added value of the solution and the consequences this may have on their day-to-day job. If a PoC has already been conducted, the demo of this project can show how the technology works and demonstrate the added value. This will also help with the next focus area: create demand for RPA.

### 3. Create demand, both push and pull

When alignment is achieved between business and IT, and the organization supports the enterprise-wide roll-out of RPA, it is important that other areas where RPA could be beneficial become apparent quickly. As mentioned before, demand for RPA is not self-evident and has to be explicitly generated in the implementation process. One way to generate demand top-down is to focus on specific managers and ask them to nominate several processes to be explored further during the implementation. Generating demand bottom-up can be done by asking employees to nominate certain tasks or activities in their day-to-day job to the project team.

## Establish business – IT alignment

• Involve IT from the beginning, if possible already during the PoC

• Create a shared understanding, about the capabilities and the limitations of RPA, the potential added value and the governance

• Establish ongoing alignment mechanisms between business and IT, e.g. a cross-functional RPA team in a competence center

## Creating support

• Create awareness of the technology and the project throughout the organization

• Establish sponsorship among C-Suite level and ownership among senior management

• Inform all employees of the potential impact and improvements this technology can bring to their day-to-day job

## Creating demand

• Proof the added value of the technology by showing the Proof of Concept demo

• Focus on specific managers and ask them to nominate certain (areas of) processes

• Ask all employees to contribute to the identification of automation potential

## Case example 2: A Nordic bank

The Finnish business unit of a Nordic bank started in August 2015 with a Proof of Concept for RPA. Two years later they have over 80 robots executing 130 different tasks, governed in a decentralized target operating model.

They learned that including experts with process-specific knowledge is key during the implementation. Simultaneously, they had to coordinate with other business initiatives, like Lean projects, to overcome spread ownership and dependencies.

The bank chose a decentralized target operating model, so each team can fully align the value RPA brings with their business unit strategy.

To coordinate the effort, there is a centralized Center of Excellence team which sets the guidelines and formalizes procedures for the decentralized development teams.

They have experienced enormous benefits from the implementation in terms of business value, reducing process lead times, less errors, and being more digital.

## Key insights

The implementation path of RPA can be significantly different than of traditional IT technology implementations. This lightweight IT solution often clashes with the current organizational structure due to the new configuration of people, processes and technology made possible by its distinctive characeristics. The enterprise-wide roll-out of RPA is often hindered by two major difficulties: the current separation of business and IT; and the lack of organizational support caused by limited visibility in the organization. Therefore, implementing RPA requires a holistic change approach, where social and technical aspects of organizational structure and processes are harnessed and changed during the implementation.

In order to overcome the organizational difficulties and accelerate roll-out, the implementation approach needs to focus on three main areas: establish continuous alignment between business and IT; create enterprise-wide organizational support; and create demand for RPA, both top-down and bottom-up.

While RPA can start as an experiment or Proof of Concept, in order to take advantage of the full potential of RPA holistic change management is key. It is critical for a successful roll-out that key organizational members are aware that RPA requires a different implementation approach than traditional automation solutions. When this is not realized, the necessity of ad-hoc agreements for every upcoming issue and misalignment can cause many delays.

The implementation approach should already be considered when organizations start experimenting with RPA, by simultaneously thinking ahead and preparing for the next phase. The required preparation entails building a foundation of appropriate governance and the right competences, and then engaging the right people to accelerate implementation.

## Keys to successfully implement RPA include:

**1. Pay special attention to continuous alignment between business and IT**

Define roles and responsibilities clearly, create a shared understanding, and organize a competence center in which both business and IT are represented. Identify the right candidates and coordinate to attract the right talent

**2. Create organizational support by involving key organizational stakeholders from the beginning**

Make sure the organization is aware of the new technology and the benefits that it can bring. Provide clear communication to the employees potentially impacted by the technology

**3. Create demand for RPA both top-down and bottom-up**

Show Proof of Concept material and any progress measurements that are available. Involve specific managers to identify potential areas suitable for RPA and allow employees to contribute. Prepare for enterprise-wide roll-out from the start of the PoC phase

## References

*Bygstad, B. (2015). The coming of Lightweight IT. ECIS 2015 Completed Research Papers, paper 22. DOI: 10.18151/7217282*

*Leavitt, H.J. (1965). Applied organizational change in industry: Structural, technological and humanistic approaches. In March, J.G. (ed.), Handbook of organizations (1144-1170). Chicago: Rand McNally*

### Suggestion for further reading
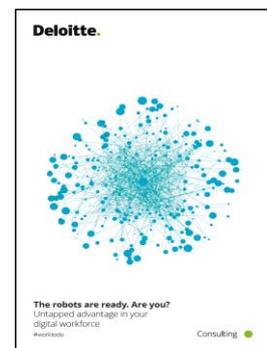


**Deloitte (2017), The robots are ready, are you?**

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