

We didn't really get along

This vanguard is a **large bank with over 60,000 employees** who appointed a Director of AI and Robotics in 2016 and stated their mission to robotise as much of the business as is feasible. There are thousands of robots already deployed across the business from the front office to many areas of the middle and back office. HR is also on the agenda, and we met with one of the key team members of the HR and Robotics team to understand progress and what constraints and factors exist in these leading companies where a huge effort has been invested in Automation, Robotics, and AI.

The pitfall of ending up looking like Gandalf: Our friend and AI enthusiast, **Elliot**, has recently moved into this new role from the reward team, was appointed some months ago to lead the design and deployment of robots in the HR area and he has encountered a problem. When he started in this role, he pledged to only shave his beard after the first robot had gone live. Several months later and his beard is down to his collar. He worries that he may end up looking like Gandalf before the first HR robot is live. Why in this leading-edge business do these delays exist and what is stopping the rapid deployment of this new technology?

Have I found the 'one'?

The landscape for HR robotics technology in this regulated firm includes Chatbots, Robotic Process Automation (RPA), ServiceNow (for ticketing) and the underlying Oracle Fusion HR Database. Decisions on which technology to use have driven delays throughout the program, with the originally agreed Blue Prism RPA provider now being challenged on a group-wide basis. A decision on what technology to use is forthcoming but these additional discussions have led to stasis in the development area with uncertainty on whether development should be continued in the current technology or started using a completely new one.

As an emerging technology, there are now multiple tools that allow for the building of robots and AI and these tools are not necessarily complementary, nor apply single standards of development. There is a real risk that development and design work on specific bots that for instance, copy data from the current HR system to the current payroll system, may prove unportable to other technology at a later date. It is unclear what the rules are in this area and how much this lack of portability of the design is intended by RPA software suppliers. The risk is that design work (which should be owned by the business) may be 'stranded' on proprietary technology with a significant cost to move it onto new platforms later. This is particularly relevant for

organisations moving from on-premise systems to the Cloud.

Lesson Proposed: There is a need to understand how portable the design is before selecting technology as portability is key when representing the ability of a business to own their solution. Ask the vendor how tech, such as robotics, will change your underlying systems and ask other customers of their experiences of underlying systems change. Remember to focus on the integration capability of your HR system in particular, whether you already use Software-as-a-Service (SaaS) or if you're planning to implement soon, and its flexibility for working with other smart systems.

Can we keep up with all these changes?

The technology and interfaces of standard Cloud software at this vanguard financial services firm are constantly evolving with twice yearly or quarterly updates and little ability to delay or reject these upgrades. This makes for a complex environment for Automation and robots – as they reach to 'pick something up' or 'put something down', the technology on which the data was to be placed may have changed, making the manoeuvre difficult or indeed impossible. A changing underlying database or interface can mean that robot interfaces, related processes and approaches may need to be revisited.

In-flight processes are a particular problem as these too need to be considered and adjusted. It is unclear whether the HR software providers are changing their code and interfaces to make the building of robotics more difficult (for example LinkedIn where the code and images are changed regularly to avoid the screen scraping and other technologies allowing the theft of data), or whether these changes are designed to drive uptake and reliance on a software provider's own proprietary robotics tools.

Lesson proposed: In selecting and budgeting robotics, there is a need to consider regular changes to the underlying technology. With the use of more and more standard cloud software components these changes, and new releases are delivered either every six months or quarterly and there are increasing limitations on the ability to delay or reject these changes and upgrades. This is further compounded by the fact that many or indeed most RPA applications integrate data from one place to another i.e. fill the gaps between technology, for example, learning to compliance, HR to payroll, etc and therefore, by definition these regularly work across multiple systems. So, if multiple changes are happening to different timespans all of the time, robots are doomed to keep breaking and need constant maintenance.

There is no downtime with AI

Elliot tells us that unlike traditional software projects where the development or project team hands over to the Business As Usual (BAU) team, with Automation the BAU team is constantly updating, implementing changes and testing. The divide between BAU and development needs to be readdressed, with BAU effectively revisiting development and testing regularly. All is not lost, however, because the level of intelligence of these bots is growing all the time, many are beginning to have functionality that allows them to continue to run even when layouts and formats change. The lack of certainty in this area is still food for thought and businesses should make sure to investigate these issues in more detail depending on your organisation's particular circumstances.

Lesson Proposed: Our advice during software implementation is to have a Functional Design Authority (FDA) and a Technical Design Authority (TDA).

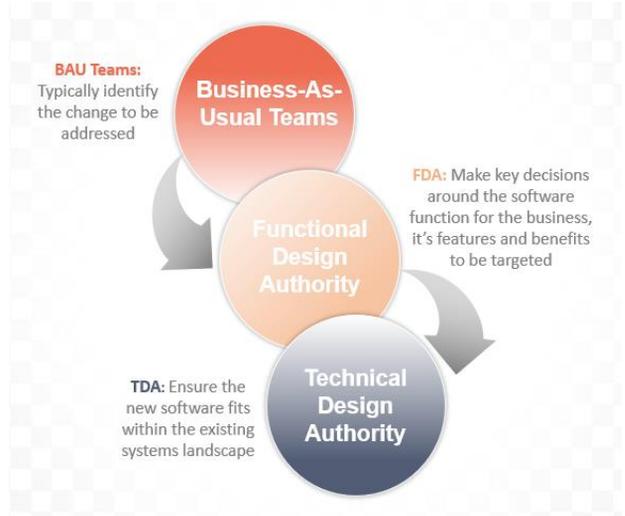


Figure 1: Recommended Implementation Support Team

After go-live, many businesses disband these governance groups, whereas, with Automation, these groups should continue to govern and monitor the system at all times.

The changing role of HR:

“The world as we have created it is a process of our thinking. It cannot be changed without changing our thinking.” — Albert Einstein

HR practitioners are used to the cycles of HR, monthly payroll, annual appraisals, and seasonal compensation rounds, however, there are no cycles or downtime in robotics, and so the work required to maintain, and drive Automation is constant. Although HR might not get involved in the technical maintenance of RPA, this does highlight the requirement for HR to adopt and familiarise themselves with AI technology to an extent, so that they can maximise the benefits of working alongside robots, who could be utilised or scaled up more during busy periods to alleviate pinch points.

Designing your robot team

Robots focus on individual processes and are set to specific tasks. Rather like physical robots on a conveyor belt, each HR robot is given one task to do. Together in concert, they build

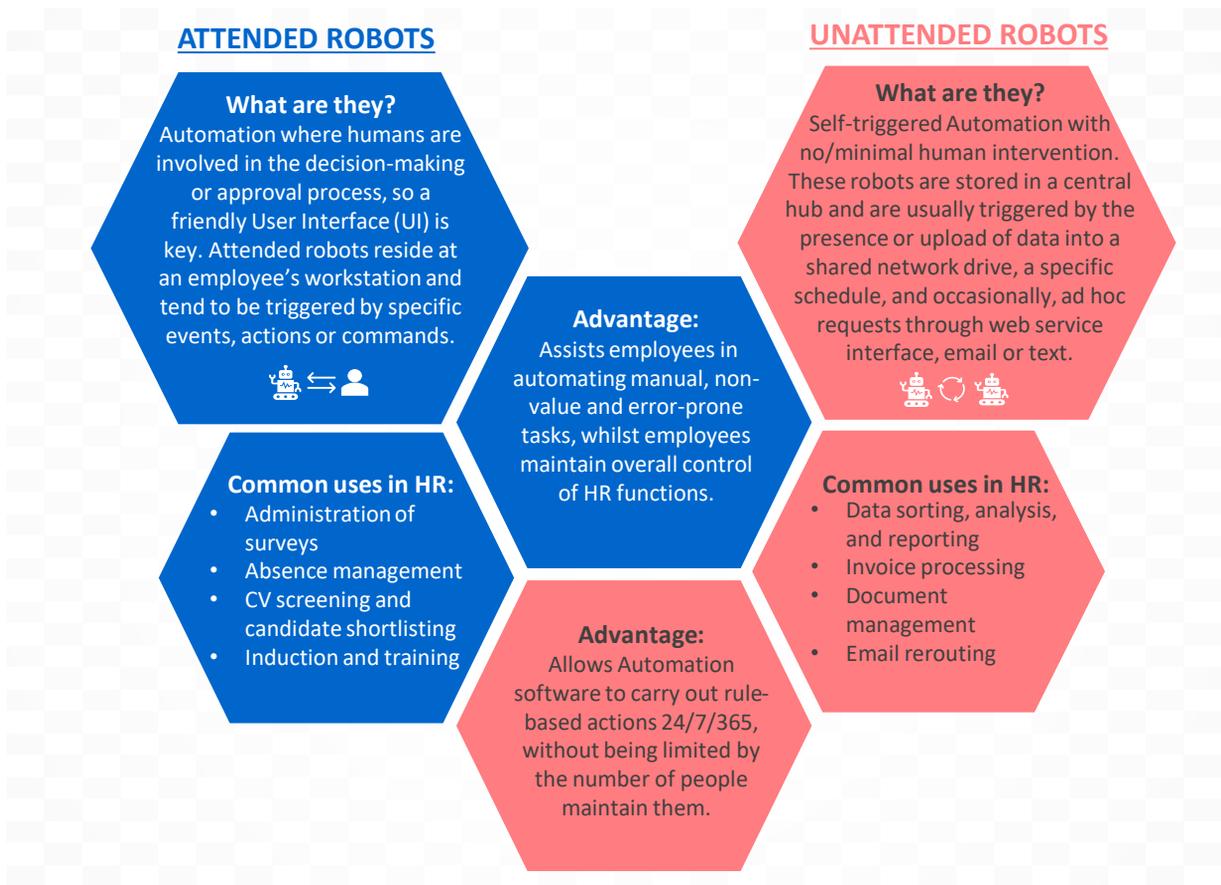
end-to-end processes and physical products. This introduces new considerations that apply solely to this robotisation. One consideration is whether to deploy **attended or unattended robots** (for definitions and examples see *Figure 2*). Some robots need human intervention e.g. to approve or check so that can exceptions are identified quickly (attended), others can run in the background without a human needing to be involved (unattended). Differentiating this level of attendance requires new skills and thinking and has different abilities to scale with unattended being more scalable without the need for more humans to manage and maintain robots.

Another consideration is the **orchestration** of their work. In old language, this can be equated to 'load balancing' across Central Processing Units (CPUs) where idle robots are re-purposed and busy ones given more

support. The speed and success of each robot needs to be calibrated to avoid delays and pinch points and where a robot is struggling to keep up, a second or third may be deployed to add capacity and improve the overall throughput on the line.

Increasingly, as development and design continue, it is becoming apparent that HR processes currently completed by HR staff are highly complex with many ifs and buts. This complexity is far greater than many front office and middle office processes.

The need for attended robots and processes that are partially automated is therefore much higher. Future HR processes will likely be robot assisted and not robot operated with no final state or nirvana of independent Automation delivering *all* the work.



Different types of robots have different strengths and use cases but they are not mutually exclusive. To reap all benefits, you could also consider a **hybrid** model.

Figure 2: Attended and Unattended robots

Resourcing and getting the right skills

Finding people with experience of RPA is challenging even for those in the vanguard. The Robotics Centre of Excellence at this global and well-known bank tends to hire people with a maximum of two years' experience of robotics as there is no one with more experience than that. It is becoming clear that the people who should be hired are those with coding experience particularly for complex processes like HR. Understanding data, databases and the rules that need to be applied require **old school rules redeployed to new technology**.

Lesson proposed: Appreciate the limitations of hiring for this specific skill set. You are unlikely to find candidates with extensive experience in AI and robotics but look for transferrable skills, such as:

RELEVANT CANDIDATE EXPERIENCE



- ✓ Engineering
- ✓ Software Development
- ✓ Process Mapping
- ✓ Technical Support

Figure 3: RPA relevant experience

You could also consider outsourcing the build of your first robot and having your potential talent shadow these resources in combination with learning about RPA.

'Built for end-users'

RPA vendors claim that the simple UI of robotics tools mean that Subject Matter Experts (SMEs) in the business can design and change automated processes quickly and on the fly. This is very much a false picture as the need to understand the data, its security and analyse the various 'what ifs', controls, and issues require real coding skill and

experience. Conversely for those with this experience, the UI tools used to develop robotic processes are an inconvenience as coding changes need to be made to individual processes through a clumsy UI. Experienced coders feel that a few lines of code would achieve the same result, instead of using multiple UI drag and drop methodology which is time-consuming and risks being incomplete and unsafe.

Elliot has demonstrated that a background in Robotics isn't a pre-requisite to leading one of the largest financial services organisations in the AI and Automation journey. We look forward to seeing how things progress once this bank reaches go-live!