Introduction

Once the future was a shining land where automatons would do all our work for us. We would be free to pursue our pleasures, and create the utopian dream that was forever promised.

Now we have so much work to do we cannot squeeze enough into our days. We must get more worker-time through efficiency drives, training, outsourcing or automation.

This paper considers how automation can give us that extra worker-time and other derived benefits. It is a complex undertaking, requiring the formation of a connected, layered architecture to make it work effectively. It requires investment, and will displace people from the comfort they have gained in their current monotonies. Upskilling is the order of the day as our repetitions are exported to machine.

A supporting architecture is presented in part 6 under the name Automation Oriented Architecture. As examples, it uses the insurance industry, and Tranzax, the real-time role replication software as the automation agent.

To investigate the relationship between automation and other business initiatives, it is compared to outsourcing - as both are cost reduction opportunities - and also lined up against governance measures.

Why we need automation

When our original IT systems were written, they met most of the needs they were developed for. Then the needs grew and changed. We redeveloped our IT systems, but they fell ever more short of goal. This can be thought of as a growing gap between business needs and system abilities. People filled the gap.

The benefits of automation

Automation promises us many great things that people are not very good at doing. When asked to do the same task over and over, the human mind will manage to introduce variety where none is required. We can get sums wrong, we can read and write numbers and names wrong. We can forget, ignore, put off, dream and chat when we have more important callings.

It is no good complaining about the variety; it has been necessary in our ability to adapt and evolve. It is part of our nature. We are not good at repeating things. Machines are.

Once people are freed of their monotonies, they can begin to interact with other people in a meaningful, value adding way, rather than hurrying through their list of questions under the crushing guardian of efficiency.

The benefits of automation are as follows:

- Unburden your work force
- Improve compliance
- Improve governance
- Increase auditability
- Increase accuracy
- Increase processing speed
- Reduce the learning curve
- Ensure customer satisfaction
- Reduce employee turnover
- Reduce workforce training
- Become a more flexible business

Figure 1. The growing gap between system abilities and business needs
More people doing more work results in more difficulty, more mistakes and more layers of management.

The obvious solution is to write newer applications to better meet the new requirements. The hope is to plug the gap; the reality is that more people are needed to support more systems. This thinking leads to an explosion of systems and support staff.

The problem is expounded by acquisitive companies. They have bought up other companies’ system explosions and need to reduce their amalgamated burden.

Four factors determine how many people an organization employs:

1. How many people are required to do the work
2. How much work the systems can remove from the people
3. How many people are needed to support the people using the systems
4. How many people are needed to support the systems

Beyond the static model, we see the effects of ever increasing requirements, from customers, auditors, customs & excise, tax, shareholders, standards authorities and governance measures.

We build new systems while maintaining the old, driving support costs ever higher. To maintain our customer service levels, we need to maintain the number of system users per customer, which leads in turn to an inflating number of support people.

The dynamic model shows each increase in systems requires ever more support people. New systems are intended to include decommissioning the old, but this rarely happens as decommissioning systems is difficult.

Automation retains the existing back-end systems for the processing they are already good at, and builds a new process around the old, adding in workflow, understanding the work context, process flow and rules based decision making.

Adding automation to a legacy system will not reduce the people required to support it, but will reduce the number of people using it, and the number of people supporting those users.

Adding automation across more than one system means the user perceives a single system, thus reducing the learning curve and reducing system access management.

Automation reduces the work burden and delivers speed, audit and accuracy improvements.
As a result, "Our policy turnaround has been reduced from three weeks to five days maximum and most of the time it takes only two days," relates Squires. "Our quality has improved dramatically and it's almost error-free. Our once-manual rating methods are more consistent and we were able to re-deploy 30 percent of our staff to other areas of the business." Additionally, the two month training process that was necessary for employees involved in the old underwriting/policy processing routine, has now been reduced to two days.

What can we automate

Some automation tools focus on time and tasks, others on workflow, and others on rules. What they all attempt is to automate the work that would otherwise require a person.

In summary

Automation can help workers do more work more easily.

Automation tools can fill the gap between the workers’ needs and the systems’ abilities more easily than further developing the existing systems.

Automation provides workflow across systems, removing informal people-driven processes and presenting a single user interface.

Automating business processes makes things happen in a more controlled and measurable way.

To understand how automation is achieved, we must first consider the terms being used by the vendors of BPM software. This is the subject of paper 3.