If it can be automated, it should be!

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This report is part of a multi-part series, co-authored by Ray Poynter (NewMR) and Stephen Phillips (ZappiStore), under the theme ‘Succeeding in an Automated MR World’.

We will also be broadcasting five webinars as a part of this theme, which you can register for on NewMR.org.

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If it can be automated, it should be! ............................................. 3
The Ballad of John Henry .......................................................... 3
Consequences of failing to automate. ......................................... 4
Four key benefits of automation............................................... 5
Automation in different stages of your business process. ......... 8
Inputs and Automation ............................................................ 9
Processes and Automation ....................................................... 10
Output Automation ............................................................... 11
Choosing what to automate...................................................... 12
Choosing options. ................................................................. 13
Choosing tasks............................................................... 14
Summary ................................................................. 15
If it can be automated, it should be! ......................................... 15
Sign up for our webinar series on Automation .......................... 15
The Ballad of John Henry

In American folklore, John Henry was a mighty steel-driving man, working on the railroads. He, and people like him, hammered steel rods into the rocks to make holes for dynamite.

Thereafter, the company bought a steam hammer and John Henry contended that it was wrong that machines should replace men; so he challenged the company for a competition, to see whether he or the steam hammer could complete more work in a fixed period of time.

The tragedy of the story was that although John Henry won the competition, he died in doing so. This story is a great metaphor for what can happen to your business if you don’t automate; when automating is an option.
Consequences of failing to automate.

Moving from the Ballad of John Henry to the modern business world, consider what has happened when companies have failed to keep pace with change and automation.

- **Newspapers**: Due to management and union weaknesses, many newspapers in London did not automate, (in the 1980s, many of them still used hot metal printing, when most parts of the world had moved on to digital), which left them open to competition from companies that did automate.

- **Retailers**: Those retailers who did not keep up with the move to online retail (and now mobile) have lost out. Examples include: those grocery retailers who were slow to adapt to internet shopping, book stores and video rentals.

- **Protected farmers in Europe**: Due to EU subsidies and trade barriers, many European farmers do not possess the efficiencies of farmers in New Zealand, USA and elsewhere. This is coming home to roost for UK farmers with the advent of Brexit. Suddenly, UK farmers will need to deal with the fact that a lamb from New Zealand (nearly 20,000KM away) is cheaper than the lamb from UK.

- **Market Research**: Those companies who did not modernize their viewing facilities, who did not embrace the internet and who did not embrace SaaS (software as a service) have lost ground to those who did.

Successful face-to-face interviewers use mobile devices, successful CATI centers use the most modern tech, and successful online panels use an array of modern tools to keep prices down and deliver even faster results.
The decision about what to automate relates to achieving the four key benefits that automation can deliver:

1. **Cheaper** – This is the benefit that most people associate with automation, because it often results in a growth of demand, caused by falling prices.
   On rare occasions, some successful automation projects may not result in products becoming cheaper. However, in most cases, if automation is successful, then costs fall, which usually means prices fall.
   Note: Reducing the cost of producing goods is always a benefit, although it may not often lead to higher margins. In most cases, when costs of production fall, so do prices. Increased profits that arise from reducing the cost of production usually depend on expanding the size of the market.

2. **Faster** – Most successful automation projects are faster than the processes they replace. As such, it increases the number of situations where something can be used.
   Innovations/automations such as 3D-printing, ‘on-demand’ book printing, overnight cleaning, or same-day ad testing mean that such services can be used in new ways, in a wider range of situations, by more people.
   Faster is likely to be a benefit if somebody is currently required to wait, or is currently not buying because the product or service is not available quickly enough.
   For instance, if you are testing blood samples overnight, an improvement from seven hours to six hours is unlikely to impact the market – it is still overnight.
   However, a change from seven hours to one hour would open up the opportunity for same-day or ‘while-you-wait’ testing.
Scalable – In most business situations, a key limit to growth is how scalable the process is. If a process depends on humans with scarce skills, then the service will not be scalable – i.e., it can't quickly double or quadruple the number of customers it deals with or the number of jobs it can handle.

One of the reasons why WhatsApp was so valuable (Facebook paid $19 billion to purchase it in 2014), was that it was handling 450 million users with a staff of just 35 engineers – because it was built on automation.

Scalable is a benefit if you are looking to increase capacity, i.e., to grow the number of sales, clients, and/or markets. However, companies/organizations that want to create scarcity value - for example, super high-value luxury goods - or high-value consultancy, do not want to create scalability.
4. **Better** – Some automation produces output better than manual output. However, some successful automation produces a product sufficiently good to generate profit and growth - but not ‘better’ in the eyes of some, or even all users of the output.

Most of us would expect a smartphone made by automation to be better than one made manually. However, most of us would expect a meal prepared by a chef to be tastier than one prepared by automation. Moreover, a meal cooked by a friend may or may not be better than a shop-bought meal and most shop-bought meals are prepared through automation.

Better is a benefit if the current quality is not good enough or if there is a market for a better product. If customers are currently happy with a product, it is rare that they will pay more for a better product.

*Note:* Not all successful automation projects achieve all the aforesaid four benefits. For example, modern wineries like multi-award winning Camel Valley in Cornwall, UK, use the latest technology to improve their product, but it is not significantly cheaper to produce; it is only slightly faster as the fermentation takes a set amount of time, but it is better and more scalable.

When you are planning what to automate, the key is to trade-off the benefits against the costs; the sections below set out how to think about automation strategically.
Automation in different stages of your business process.

There are essentially three stages of your business that may be suitable for automation:

• Inputs
• Processes
• Outputs

All these three stages offer varied opportunities.
Inputs and Automation

There is a wide range of different inputs that companies use, many of which can be automated. Inputs include **products** (such as components), **utilities** (such as electricity or the internet), **services** (such as accountancy and cleaning), through to **labor**, i.e. the people who make the business tick.

It does not make sense to change a supplier just because the new supplier has automated processes. The reason to change is to gain one or more of the four benefits listed above: Cheaper, Faster, Scalable or Better.

Companies producing smartphones buy components created through automation. Hospitals buy automated/computerized-testing services to increase speed and accuracy. Brand managers buy automated research, enabling them to adopt an agile/iterative approach for product and/or advertising development, because of the higher speeds and lower costs.

Automation is increasingly improving the way inputs are **purchased** (automated markets), the way they are **delivered** (drones), and the way they are **utilized**.

For example, online access panels can buy additional samples through routers and feed them into surveys without any manual steps along the way. Similarly, programmatic advertising buys ad space and allocates advertising automatically, making it cheaper, scalable, and by some measures more effective (i.e. better).

Another way to take advantage of inputs and automation is to outsource a process currently conducted in-house. For example, imagine you are managing a restaurant that currently peels potatoes. By switching to buying potatoes from a supplier, who can peel and chip them cheaply and efficiently, you can streamline your process.

Over a period of time such process can move backward or forward. For example, a research company may start analyzing open-ended comments in-house, thereafter they may outsource it to a coding agency that blends automated and human techniques to produce faster/cheaper results. Later, the agency may bring coding back in-house when the cost and quality of fully automated solutions become cheap enough.
Processes and Automation

Automating processes has been the key to improvements dating back to knitting clothes with the looms of the industrial revolution, planting fields with Jethro Tull's horse-drawn seed drill in 1700, and the spreading of knowledge - starting with the automation of printing - in the Western world, in Gutenberg in 1440, but even earlier in China and Korea. Later in this report, we will discuss how to pick tasks and functions to automate.
Self-serve: Allow your customers to access your wares, 365 days, 24/7, at their convenience. Such process is an essential part of most online services, but also covers a wide range of conventional products and services such as taxis, pizzas, and automated checkouts in stores. Amazon Go, a supermarket with no checkout, has completely automated the process, records what you pick up and debits your account – no queuing, no checkouts.

Delivery: From robots in the factory, to drones delivering the finished product, automation is changing the way physical goods are being delivered now. Such change is even more relevant in areas like delivering news, reports, and analyses, where automation can be used to ensure that the right service reaches the right person, at the right time - using push technologies.

Automating the deliverable: In the past, people often delivered reports and data tables, now they are likely to deliver the information with services that can automate searching, reporting, and analyzing. Mapping services used to deliver maps, but now they deliver satellite navigation that can automate route finding and route tracking.
Choosing what to automate.

The key is to remember that you can’t automate everything, and you shouldn’t. The meme we share states that, “If it can be automated, it should be”. There are two key criteria that define the phrase “If it can be automated”:

1. Only automate things where the benefits clearly outweigh the costs/problems/distractions.
2. Only tackle the automation projects at the top of your priority list. Trying to tackle too many things will often lead to sub-standard results, and poor accountability.
Choosing options

There are a lot of alternatives available to you when you decide to automate; so here are some guidelines for picking such systems:

1. Choose options that are already working for somebody else. Unless you like living on the bleeding edge, avoid being the first person in your market to try a new technique – most new techniques fail. Remember, in most situations there is no such thing as a first mover advantage; Facebook wasn’t first, Google wasn’t first, Apple wasn’t first – they took what was working for other people and did it better.

   a. As a corollary to this piece of advice, in most cases, do not develop your own system, buy into a system that somebody else has already developed and tested.

   b. Also, if possible, modify your processes to fit the proven system, rather than paying to modify a system.

2. Choose options that integrate with your other systems. Think of it like the children’s toy Lego. When you buy another box for your child, you want to buy more Lego, not Meccano, not K’NEX. Or, if you are a Meccano household, you next box should be more Meccano. Automation that does not integrate is a blind alley.

3. Choose options that you can implement, start using, and gain ROI from, within 12 months. The world is moving too fast to work on longer timelines. 12 months after you commission the project, you want it to be up-and-running, and delivering a net benefit.

4. Use an object-oriented automation approach. These approaches have been borrowed from software development and comprise completing self-contained tasks. Try not to automate half a task. Also, in most cases, try not to automate two separate but interconnected things at once.
Choosing tasks

When choosing what to automate, the following points should be of assistance:

1. Only tackle tasks that are **big enough to be worth tackling**. If once a year you need to spend half a day doing something really tedious, then unless the automation can be achieved in less than half a day, just ‘suck it up’ or pay somebody else to do it.

2. Tackle tasks where the automation produces **big savings**. In many cases the final benefits will be a bit less than projected, because there are often exceptions and special cases to be dealt with. If you are planning to make big savings, then a small undershoot won’t be a problem.

3. Tackle the **unpleasant tasks**. When choosing what to automate, pick the tasks that people don’t like doing. This will help gain buy-in and will assist in boosting team morale. In the medium term, you will end up automating tasks that people really like doing, but there is no need to start from there.

4. Tackle **pinch points**, and issues that will become pinch points when your business expands. One of the key benefits of automation is that it can make it easier to scale your operation up.

5. Tackle areas **where your clients will see automation as a positive change**. Automating your weekly catch up with your key stakeholders would typically be a bad idea. However, creating a system where your decision makers can access information 24/7 from their own computer or mobile device is a positive change.
If it can be automated, it should be!

In the words of W. Edwards Deming, “It is not necessary to change. Survival is not mandatory.” In most businesses, there is a need to pursue automation in some of the inputs, processes, and outputs – if the chances of surviving and doing well are to be improved.

This report aims to assist you in refining your approach towards automation; the subsequent four reports will discuss different aspects of automation in greater depth. The series of five reports is as follows:

• 31 March, If it can be automated, it should be.
• 24 May, The skills needed to prosper in an automating world.
• 6 July, A client’s perspective of automation.
• 7 September, Automation: a strategy of tactical efficiencies.
• 9 November, Using agile approaches and automation to go from research grind to actionable results.

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