



Resource Design

Your 3-Step Plan to

Better Hiring Strategies that Enable Technology Automation

By Josh Rutstein

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IN 1983, THE MOVIE *WAR GAMES* introduced pop culture to the notion of job automation when Dr. McKittrick (Dabney Coleman) told General Beringer (Barry Corbin) that they need to “take the men out of the loop.” This would place NORAD missile control in the ‘hands’ of the WOPR computer (aka “Joshua”). Fears of a computer simulation spawning World War III ensued.

Executive Summary

Automation is hot right now. The US presidential election is propelling a debate about creating jobs specifically in the spaces that are ripe for automation. Unless you are the current Treasury Secretary, it’s a big concern. The purpose of the technologist is to apply technology wherever it might be useful. Technology enables scale and a technologist’s objective is to make a difference. Software developers have been working on the problem of reducing manual work for years. We imagine infinite scale as the final destination.

The push for “scale and efficiency” has been the driving force of automation for at least a decade. In case you don’t know that term, it means less manual processing. Many technology projects are aimed at automating manual processes, as well as increasing capability and leveraging data. AI has become the catch-all term for future technology that will automate many manual office functions that exist today. Specifically, AI is technology that learns how it can help you more.

Yet despite all this effort there is still too much waste in the system. I started my career doing basic accounting in 1993. My most recent job change moved me back into this space, and I can’t believe how

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much of it is still manual, 24 years later. Cost reduction efforts in the 90’s and 2000’s led to offshoring. But executives learned that cheap labor can’t compare with a technology mindset that enables flexible system interoperability. This architecture will let technology function in ways that price out even the cheapest and most efficient labor pool. Those jobs are in fact coming back from overseas, but it’s not a person that will be doing them.

Let us temporarily set aside the socio-political implications of this change. Instead this paper will address the stark reality that companies are not embracing automation in the right way. To be successful, we need to shift the dynamic from a financial focus, to an enterprise functional one. The profit motive is still paramount, but we need to be more creative in the way we realize marginal profitability gains.

What that means is that we need a new skill, deployed in a new way. Just as good design is now the bellwether for technical success, creative design needs to be utilized to enable the Human Resources and Finance functions to be successful in partnership with Technology. I am proposing that we look at our suite of resources as a pool of virtual talent, and someone needs to design the best way to use all those components together. You might think this is being done already, but if you stay with me, I think you will see even your own organization a little differently. Enter the age of the Resource Designer; half strategic thinker, half technical architect and half HR consultant.

Use Case

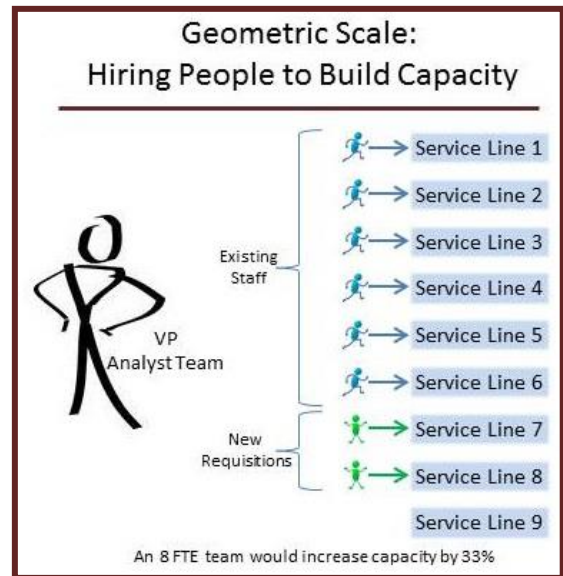
A team of 6 analysts is supporting a large multi-product operations team. They partner with each service line to provide a variety of data-based analytical insights deemed critical for ongoing operations. Progress in consulting with each product line is slow because each line requests a new analytical model. A decision is made to request 2 more resources so the team can execute on management's request to deliver faster. Eight analysts are more productive than six.

The Problem

As the business grows, we look at the human factor first and technology is just a complement to the people involved. In our example when we need more analytical work to be completed, we hire more analysts to do the work.

In general, I see much the same mentality across other parts of organizations too. Back office technology is primarily viewed as a tool to replace repetitive processes once the processes are institutionalized. It is a mechanism to reduce labor, increase accuracy and save cost. Sometimes it is used to aid in manual processes like assembling data for analysis and marketing analytics. Other times technology is the transport protocol for moving information between people. But in the end, people are still in the loop and directly limit scalability.

I spent the middle 20 years of my career in various forms of technology. What I have come to realize is that there are problems in merging people, process and technology when you are evaluating a function that is already being performed by a person. Technology is not meant to replace a manual process. Technology should free you to think about getting something done without being limited by human-centered manual processes.



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When a business unit owns the solution, they own the implementation of that solution. This usually starts with a non-technical person scoping a proof-of concept and trying to evaluate if something is logically sound and has a positive ROI. If the solution is promising, the business evaluates priorities of their discretionary development budget and possibly engages technology. Priorities are set for all the competing projects. If funds are not available, that person continues operating their manual (aka desktop) solution, because the results are valuable. This inevitably becomes a mission critical capability and that person is designated a 'single point of failure' essential to operations. The resulting applications have many names; spread-marts, user developed applications, or generically "tool".

If the BU does engage technology, now begins a highly inefficient process of defining scope, MVP, requirements, use cases, budget, team staffing, etc. We also factor in QA staffing, user acceptance testers, and try to chase down all the interested parties that have become intertwined with the desktop solution, ensuring their needs are also met. All of these steps packaged around the core development add significant cost to the effort. Most of these components are needed because the 'system' we are replacing is production-like.

But at the core, typically the project is focused on replacing the manual desktop solution POC. Sometimes we are lucky and are enabled the opportunity to re-engineer the process and make it better. Realistically that is also a cumbersome process of negotiation with an entrenched customer...

Tech - Can I use a surrogate key instead of concatenating 3 fields to create the customer code like you did?

Bus - Well we use that code to join to system xxx and some internal joins because Excel can't do a multi-column vlookup and the logistics team really knows those customer codes well when they need to lookup sales records...

To summarize, the problem starts earlier, when we attempt to scale business capability by hiring people who create their own POC. Historically this has been the fastest way to scale up new work. I see this all the time. Analysts are hired to find insight with new combinations of data. They spend months rock-fetching data sources and then merge that data in desktop models before doing simple analysis to copy and paste the results into PowerPoint.

What triggered my thinking for this paper was that in my own team, we recently hired a peer to manually extend an existing POC to new service lines. As a former technologist, it was clear to me that the smarter long term solution for our existing model would have been to leverage technology and

create infinite scale for all the service lines. I recognize that infinite scale should put me out of a job: That is a good thing for the company.

The real problem is that a hiring decision is made without the best interest of scaling the company. It is made with the best interest of scaling the localized function. Think of how our use case came to be, there is a VP whose 6 person team is doing good work for the company. If that capability is proving really valuable, what would the C-Suite do?

CEO - "This is great work, how do we scale this across more of the business so they get to reap the benefits you've gained with teams x, y, z?"

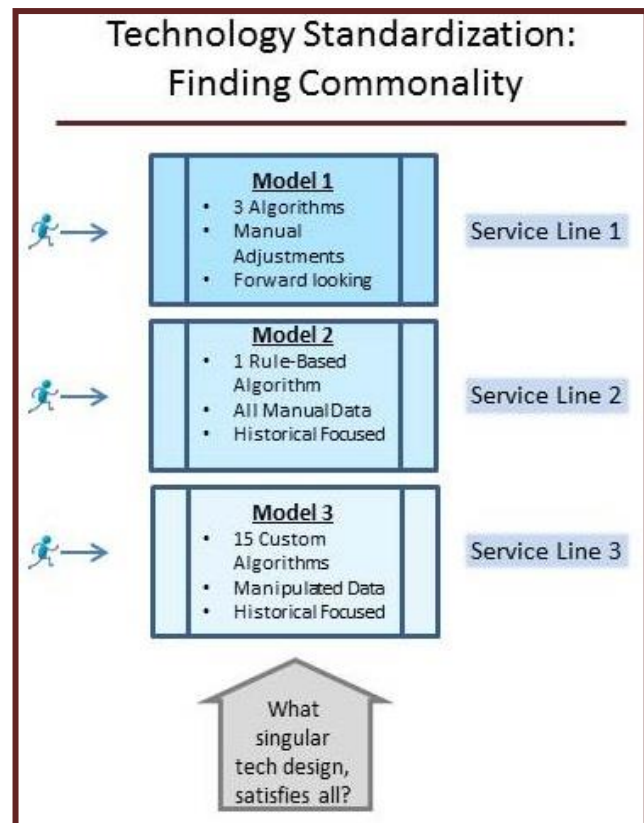
VP - "My team is grinding themselves like crazy, if I had 2 more heads I could get to those groups over the next 18 months."

CEO- "Can we afford new heads?"

CFO- "Yes. The fully loaded cost is \$250k and we predict this will decrease expenses by \$2.2m It's a good investment.

CEO- "Do it"

Sometimes technology is contacted to see if we can speed the rollout or how we could think about automating some of the processes. But most often technology is not considered as an alternative solution to the original problem. Most hire decisions are made by a BU lead asking for budget from Finance to do more of what they are already doing. This may NOT be in the best interest of the company. That request to hire people to build capability is inherently not scalable. Further, if you wait several months, automating that manual activity becomes harder, because business processes are entrenched. The job of the technologist is made exponentially harder for each new person that puts their stamp on a manual process that we want to standardize with technology. We need to be smarter.



The Solution

What if you could automate the activity of the proposed 8 person team for the development cost of \$300k and a new run rate of \$250k (2 FTE total)?

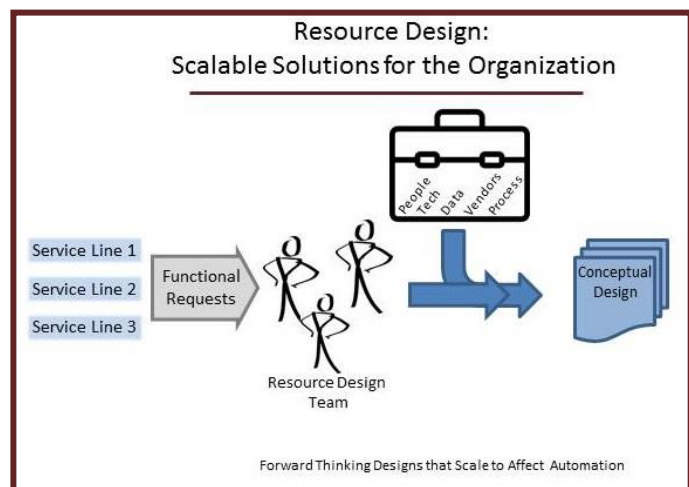
HR, Workforce Planning and Human Capital Management are all disciplines focused on how to get and cultivate the best resources. But nowhere does HR challenge the notion of what kind of resource we should employ. That is part of the job description in the requisition from 'the business'. Finance challenges only the cost of the effort, not whether the resource strategy is worthwhile. Leadership's concern is an ROI evaluation of a new role's ability to positively contribute to the bottom line. In a world evolving towards ever expanding technology capabilities, there is no corporate role tasked with evaluating the technical feasibility to perform that new role, but without the person. A "new role" is a euphemism for any new work that leadership deems important.

A business unit VP charged with a function has the wrong incentives. They are incented on the amount of work completed and the efficiency. But efficiency is evaluated based on the current model. Not the way it could be. If you have lots of heads, you scale geometrically, not exponentially. If someone is asked to do more and in response asks for more resources (people), that should set off alarms. Once those heads are on-board, making a machine act like a human is hard. But making a process work like a machine is much easier.

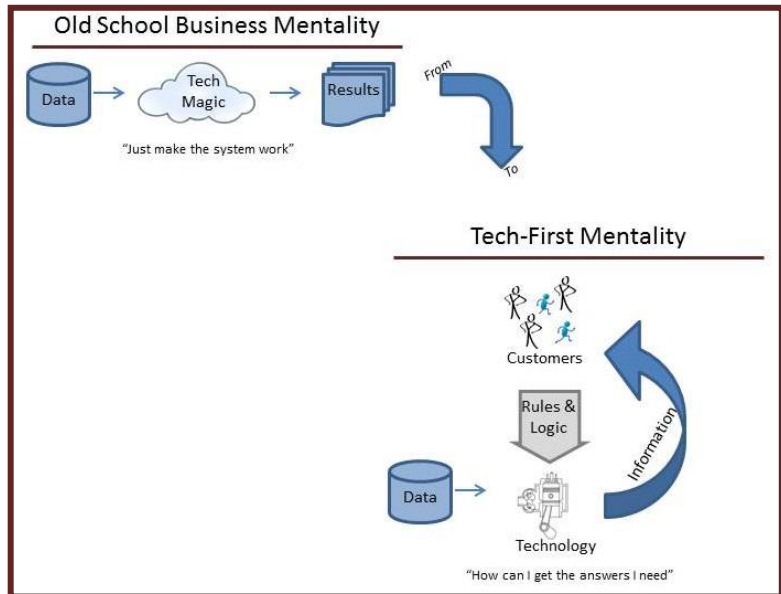
In response to these realities, I am calling for a 3 part change in the decision making process for staffing.

1. Create a Resource Design Team. Include someone with a technical mindset such that every staffing decision is evaluated to determine if that request for resources should be human, or machine-based. I would call this person a Resource Designer as they would be charged not with designing the solution, but with designing the optimal combination of resources to get the job done. These resources include,

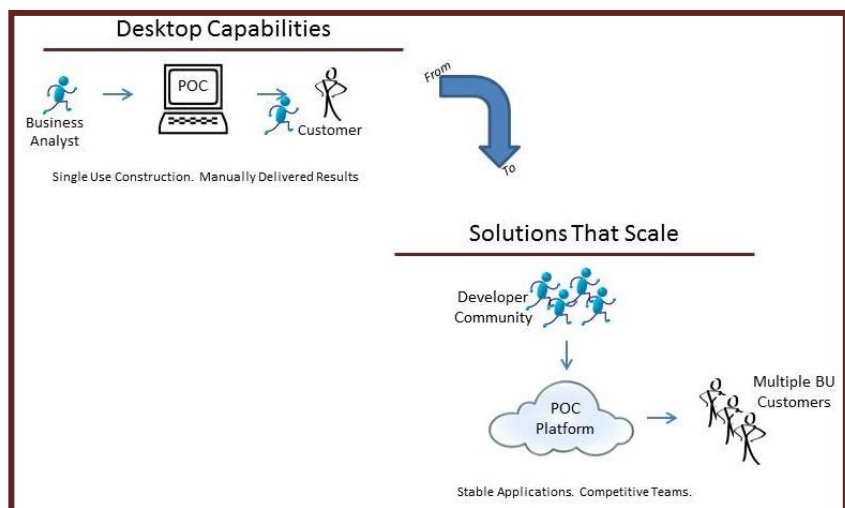
- Purchasing data
- Outsourcing
- Crowd sourcing
- Purchasing tech
- Developing a custom solution
- Hiring people
- Hiring temps
- Leveraging internal teams



2. Teach Tech to Business People Non-technical staff and leaders need to be educated on some basic concepts of system design. If we acknowledge that the future is technology, then everyone has to learn a few things to make the best decisions about technology. I'm not talking about the ability to write code. Rather, people need to learn to think like a machine or at least understand how a business rule can affect change in a computer program. Rules are the most important part of any system. This shared mindset and vocabulary will significantly assist business people talking to technology. No more requirements documents and use cases; that is a waste of time. Talk in terms of functionality, user experience and capabilities.



3. No more desktop POCs. With the simplicity of cloud solutions, there is no reason to ever build a proof of concept on the desktop. Instead we need to enable technologists within a large organization the opportunity to quickly create these solutions in production capable platforms. Your architecture team can define the basics like tech stack, standards and governance. These should all be technologies that can inherently scale to be managed as a production capability. If there is concern about funding, remember, this is a POC. We are building MVP at best. In an effort to promote vitality and give technologists new opportunities for growth, the POC should be defined as a "product" and posted to an internal 'board' that the tech community can build as 'extra credit'. Platforms like Workmarket and ODesk could facilitate this internal outsourcing of development.



Companies that act like a startup are *not* likely to be susceptible to the innovators dilemma. But a large established company cannot *be* a startup. They act differently, probably because of the stability afforded by having capital. Recently Reid Hoffman’s podcast included an interview with Airbnb’s Brian Chesky. There was detail of the startup’s extensive use of manual processes until they became painful.

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Only then did they consider automation. When you are a startup and instinctively nimble, this kind of shift is natural. But an established company has a culture that will perpetuate norms such that they become institutionalized: “Manual” becomes the norm. By using capital to develop real solutions, we eliminate the chance of institutional bad practices and at the same time gain a competitive advantage by creating scale earlier in the product life-cycle.

Leadership needs to promote this mentality not only in their staff but also enthusiastically drink the Kool-Aid themselves. If a supporting analyst does nothing but run a report, perform simple analysis and paste into PowerPoint, then that leader is killing vitality and innovation. Run the report yourself. Senior leaders should never accept data presented in a graph, table or matrix unless it is being viewed in the reporting tool directly. If we say that “everyone” needs to own vitality, then that better be EVERY one of us.

Disrupting the Approach

AI and technology are transforming business. Everyone acknowledges that the pace of disruption will only increase. If unchecked, that disruption occurs haphazardly. As organizations grow to deliver more, there is an offsetting pressure to reduce cost. If we wait too long and then deploy something like an “AI Initiative” to search for places to find efficiency, we have already lost. Technology needs to be at the forefront of all hiring decisions to weigh in on the resource we are pursuing in the context of the goal to be achieved. Technology is now more important than finance in these situations. The questions should be;

First – What type of resource is best? Determined by Technology

Second – How much does it cost? Determined by HR and Procurement

Last – Can we afford it? Determined by Finance

When it comes to customer products, we are always focused on excellence in design. That should also apply to the way we approach completing non-customer-facing work. Resource Design is just as important because the internal efficiencies of an organization, directly contribute to the administrative cost layered on products for our customers. This needs to be an enterprise level focus and a dedicated practice.

In our use case, a Resource Designer could evaluate the role of the analyst as well as the whole analyst team. Maybe they are maintaining customer attributes manually. The Resource Designer could spec a system to replace the majority of the team by purchasing customer data, adding onto an existing warehouse with operational data, creating a business intelligence capability to replace all but one of the original analysts and leveraging existing central production support teams. To physically build this new application we could post the design to an internal “freelance” site so that virtual teams of our existing associates could bid to create it. We talk of leaving x% of a person’s time open for career development, yet we never give them tangible options to develop their career. Imagine looking at an associate posting for an internal transfer and in addition to their current role, we have multiple evaluations from other staff in the company for internal freelance jobs they completed. Awesome.

Conclusion

When it comes to technology, resistance is futile. The thinking that computers can’t be programmed to follow “if...then” commands just like a person executes as part of their job, is misguided. I hear it all the time by people looking for job preservation: “You can’t make a system deal with all of the exceptions that I do.” The AI and automation wave is coming, we need to embrace it. Corporations need to manage the process proactively instead of waiting for technology to be knocking on the door. Historically whenever this happens, it is adopted with so much resistance that it is bound to fail as the work is pushed down from the wrong places. We need to get ahead of the curve. There is going to be disruption and it could get very messy.

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The role of the Resource Designer is to evaluate all the tools available to solve a problem and think in the best interest of the overall corporation. Only then can leadership make a decision evaluating possibilities on a true ROI basis. A Finance person calculating ROI, can only do so based on certain assumptions. But it is not their responsibility to craft operational and technical assumptions on which to base a calculation. That premise is unfair. The Resource Designer is a partner to Finance, Operations, Executives and HR. They act in the best interest of both customer and shareholder. Very few people possess this skill. But it can be taught and culled from people in your organization already. We just need to decide that it is the right thing to do.

Eight analysts mean you have a strong team. One analyst means you just saved the company and customer 88%. The latter should be a better story for your resume. We should create an environment in which there is perpetual competition to create even larger savings.

Shall we play a game?



Josh Rutstein is a Director at a financial services company by day, and Founder/CEO of an EdTech startup on nights and weekends. He enjoys horse shows and soccer games with his daughters, hiking and skiing with his girlfriend, and being a passionate New England Patriots fan with friends. He is an enthusiastic American and provocative thought leader in a number of political, business and sociological subjects. His writings are published on his blog at www.joshrutstein.com

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