

Federation 2.0

Mapping the stakeholder groups to the scenario quadrants

With Scenario Planning each quadrant can be equally likely to occur, or more accurately, it is likely that components of each quadrant will occur simultaneously. While each Stakeholder may have a preferred outcome, it is unlikely that any of them will be able to significantly influence the environment in which we will find ourselves in the future. This reality is particularly true because other players with other preferred outcomes also are likely to try and influence the environment.

As a result, it is helpful to consider the impact that each scenario would have on stakeholders as they exist today to help inform how they may evolve to be better prepared for what the future may hold. The chart below was created in terms of the focal question of what the future of scholarship, education and research will look like in the next 10-15 years through the lenses (axes) of Opportunity and Agency¹. It uses the scenario stories as examples of these potential futures and their impact on the stakeholders.

Stakeholder	Operating today Where is their opportunity? How abundant? Primary agenda. How much Agency over this agenda?	Mission Accomplished Abundant Opportunity - Directed Agency	Multiply or Divide Limited Opportunity - Directed Agency	I Will Survive Limited Opportunity - Autonomous Agency	Tinder for Collaboration Abundant Opportunity - Autonomous Agency
Individual students or academics	<p>Opportunity is often dictated by the individual's ability to secure resources. In some fields, regions and for some communities this ability is higher than in others.</p> <p>Depending on the country that the student/ academic is, they may have great latitude in their agency to pursue specific areas of scholarship, education and research. Some countries focus on individual choice, while others take a more directed approach. When directed, it may be done via resource allocation, individual testing, regulation and policy.</p>	<p>With greater opportunity it is likely that the fields pursued will broaden, though could be restricted by more directed agency.</p> <p>In the Mission Accomplished story, researchers and even students work directly for mega corporations, and no longer stay with universities. These mega corporations also directly take on education for K-12 for specialized talent development that benefits the corporation. In other locales, however, increased public funding to traditional academic institutions is directed toward research that fuels economic development in new businesses & products. Research agency is further restricted by private ownership of intellectual property.</p>	<p>With limited opportunity and directed agency, it is likely that fewer will have the opportunity to do research, particularly of their own choosing.</p> <p>In the Multiply or Divide story, opportunity was limited to working only within the country, and the country leaders have directed all resources to only projects that directly benefit the country as per the government agenda. External collaboration is not allowed.</p>	<p>With limited opportunity but plenty of autonomy, those who do get the opportunity to do research (i.e. those who were able to secure funding (for themselves)) are likely to do everything within their powers to make sure they keep on getting their funding in the future (i.e. they protect what they have).</p> <p>What does this mean?</p> <ul style="list-style-type: none"> ● Lots of competition / elbowing (and thus secrecy) ● Little/less collaboration? (More collaboration would mean an increased chance someone else can do it better than you) ● Researchers become excellent marketeers 	<p>With abundant opportunity and autonomy, individual academics have . Students with a clear vision of what they want to research and achieve will have all the tools at their disposal to do great things. Some students however, will struggle without some form of structure or direction. There could be lots of creativity and innovation, but possibly not enough direct focus to solve big problems.</p>

¹ This work is intended to inform the additional focal question of how federations can optimally position their offering to enable and support scholarship, education and research.

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				<p>(they know how to sell their work)</p> <ul style="list-style-type: none"> Studying on The Academy becomes something for the happy few (since chances of securing a (paid) job at The Academy are slim?) 	
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<p>Research and scholarly communities/ disciplines/ VOs - LARGER, more resources</p> <p>Academic organizations - leading edge</p>	<p>Those communities that are larger and have more resources tend to have greater opportunities. Talent is drawn to them, others seek them out for collaboration, and it is easier for them to promote their work to gain additional opportunity.</p> <p>This abundance of resources also tend to enable great agency of the work done. Externally, regulatory, or cultural restrictions may be present. Additionally these communities tend to be very aware of public perception of their work to ensure continued resource support.</p>	<p>These stakeholders already enjoy a large amount of opportunity, so increased opportunity may require them to take additional actions to maintain their privileged status. Greater direction in agency may not directly affect this stakeholder, but could change the dynamics of where resources come from.</p>	<p>These stakeholders must operate within a prescribed area, and the opportunities within that area are also limited either by resources, regulation or culture/ norms. This limitation could eventually stifle innovation. Also, being isolated means that equipment/techniques/knowledge etc are behind the level of other countries.</p> <p>While larger institutions may have more resources than smaller ones, they all face similar restrictions and limitations. In some cases, smaller institutions may cease to exist</p> <p>In the Multiple or Divide story, the government dictated how students are "trained", with specific skills favored over</p>	<p>I suppose limited opportunity means less large VOs / research projects. Since individual researchers focus on securing their own position (read above) *and* they are in the position to go their own ways, why would they put what little funding they have on a big pile and lose (some of) their autonomy?</p>	
<p>Research and scholarly communities/ disciplines/ VOs - SMALLER, fewer resources</p> <p>Academic organizations - Long tail</p>	<p>The research communities that are smaller often specialize in "niche" areas that can provide them with greater opportunity and agency because of the scarcity of the specific specialization. But not all succeed. Small changes in resource priorities can significantly impact these smaller institutions,</p>	<p>Even with large commercial agencies driving the research agenda, funding will likely still be readily available through these agencies to topics they do not wish to directly engage. Smaller VO's and scholarly communities will likely increasingly depend on</p>	<p>On the other hand, the number of small VOs / research projects will likely increase. For one, it's impossible to do certain research completely isolated from the rest of the world. So in some cases, collaboration is needed. But let's keep it as</p>	<p>Abundance provides opportunity to these stakeholders</p> <p>Opportunity for dynamic innovation</p> <p>Lack of cohesion may mean the</p>	

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	causing them to merge, or sometimes close their doors.	major commercial agencies for funding and infrastructure support in a similar way smaller companies depend on low cost cloud services offered by large cloud vendors to run their business. They may also increasingly rely on outsourced (likely non-profit) services organization to help manage business and IT matters.	general ones.	small as possible, to ensure the individual researcher can claim the successes. Also, the tools used in collaboration are mostly free (e.g. Google Docs) , and ad-hoc (every collaboration decides their own tools.)	
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Commercial interests	While these stakeholders hold significant opportunity in the product and economic landscape, their opportunity and influence over general research and scholarship has been somewhat limited, usually focused specifically on their product lines. Through corporate education, finishing programs and workshops, they have been working to influence education and research direction, though currently face significant systemic and policy restrictions in setting the general direction of education, research and scholarship.	With increased opportunity, these stakeholders may decide to apply their resources to areas where they currently do not operate In the Mission Accomplished story, this stakeholder further secured their existing opportunity dominance through control of intellectual property and attempted monopolization of the talent pool by creating attractive research and education alternatives that benefited the corporation.	These stakeholders would be similarly restricted, and in some cases could be assumed by the force that is directing actions and/or managing resources, perhaps a state actor. Those dissatisfied with these limitations will be enticed to "cheat", likely creating enterprise outside of the restrictions as part of a black market. In the Multiply or Divide story, most commercial work was being conducted within these restrictions with work done by both private and public agencies. Though, one character is seen to be developing a commercial interest outside of the restrictions in what is	Commercial providers will jump into the research market with "free" tools, since they know research budgets are limited. By selling personal data to marketing agencies and other companies, these providers can sustain their operations. Competition is scarce, since the market is not very big (and highly distributed globally, which means only few commercial players actually have a shot at this).	

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			considered to be illegal activity.		
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Funders	Private funders generally have a large amount of agency in how their resources are distributed. Competition for these resources is generally healthy, so funders have latitude to choose the projects that best fit their funding objectives. Public funders are often directed by the governmental agendas in the countries in which they operate. Though, within these agendas, funders can have latitude in how resources are distributed.	Traditional funders (government, philanthropic organizations) continue to offer funding opportunities. Although with commercial agencies funding areas in their interest, these traditional funders may shift to focus more toward funding the remaining areas being neglected by commercial agencies.	Limited opportunity for funders could occur through regulation or financial events that restrict resources. Agency could be restricted through similar means. These conditions would be a catalyst for change in education and research. While funders are not directly referenced in the Multiply or Divide story, it is feasible that close resource management, including funding, has been restricted to only meet the objectives of the government.	Limited opportunity -> likely less funding/funders. Probably more private funding as opposed to government funding? As private funders generally enjoy more autonomy (see Operating today on the left) More competition between funders, less open, less sharing of results/resources	
Governments/ political Regulators/standards bodies	In some areas, government and regulators gain their agency either through the electorate/ those being governed. In other situations, the ruling body has free agency to pursue an agenda of their choosing. To varying degrees, those affected by regulations and standards can influence their effect, often by manipulating the extent to which they meet or subvert requirements. Representations for all four of these quadrants are already present in the world today.	Issues: when commercial agencies drive research, who owns the IP, particularly in basic research where the outcome does not directly result in commercially viable product. Governments may need to visit the issue of right to knowledge at a fundamental level.	Today, governments with limited opportunity and directed agency might be those that have significant global actors enforcing financial or political influence. Governments at war are also likely to find themselves in this quadrant. In the Multiply or Divide story, the country has been isolated, and for this reason, the government and regulatory bodies have chosen to focus all activities on things that they feel directly benefit the country.	With limited opportunity and much agency, those who did manage to secure their place in the Academy will likely do their best to keep their place (unless it's a (first) stepping stone on their career ladders?). This means they will focus on popular topics and areas. Governments will do the same. Populism anyone? Also, there will be less interest in standardisation; results will be kept for themselves (no sharing).	

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Libraries, resource providers, repositories	These stakeholder groups tend to seek out opportunity where resources are available and restrictions are minimal, except where designated to provide a specific function.	Resource providers will likely begin to align with the major commercial interests funding the research. Companies that only provide delivery platforms today may become IP owners and directly produce "content" resulting from the research it funds. See issue regarding the public's right to knowledge...	Restricting opportunity and agency with this group of stakeholders would likely result in consolidation as the ability to differentiate is limited in the environment of restricted opportunities. In the Multiply or Divide story, the government created a single system of policies, applications and processes that all are expected to contribute to and use. This action makes it more like public good.	Less people to cater for; and they have more to say. Less libraries in total? And those who survive become bigger? (I.e. more consolidation)	
Society at large	There is great variety globally in how society at large currently is affected by opportunity and agency. As with Government and Regulatory Bodies, all four quadrants are present today somewhere in the world.	With their ability to offer education, training, and academic credentialing from early life, society may begin to view these large commercial interests as more than product and services providers.	In a society with limited opportunity and directed agency, individual choice is extremely limited, if present at all. Innovation is shunned, arts and humanities express a central set of ideas, not necessarily those of their creators. With so much limitation, there is likely to be more secretive expressions of individuality. In the Multiply or Divide story, all education, research and individual action is directed to "making our lives easier." Though, the story suggests a fair amount of individual	More competition (in a bad way) Science is less important (e.g. by governments to spend money on) More focus on popular topics which help the researcher's career; less fundamental science and vague topics with no immediate (societal) benefit.	

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			flexibility.		
How trust works		<p>Question: when the top commercial interests become your vehicle and roads to learning and working from early life, do they not by default become your trust anchor?</p> <p>An online credential issued by such commercial interest may become as valid and as trusted as a passport issued by a government...</p>	Internal to the country, the proprietary systems work well - they don't interoperate with any other systems used around the world.	Can imagine that trust comes with experience; if one is able to secure their own funding out of a limited amount, he/she must be good (and thus trustworthy?).	
Incremental vs disruptive change [Matrix 2			In the story, the change of the countries condition was a disruptive one but since then there has been rapid, focus-driven (country mission) development with agile methodologies utilised to deliver systems for the population. As there are no interoperability requirements, the projects can be rapidly developed and deployed.	<p>On the one hand, incremental. Little opportunity = focus on what people know/understand to be able to convince them or your idea(s).</p> <p>On the other hand, limited opportunity and much competition (read above) means people will take higher risks? High risk, high reward. Could lead to (more) disruptive change?</p>	