Designing for Chaos

Embracing disruption to drive innovation

Altus Consulting

People | Passion | Partnership

Altus Consulting is a specialist provider of consultancy services to the Financial Services sector.

We help clients achieve operational excellence and improved returns through a combination of proven industry models, technology expertise and market insight.

For more details of these services please visit our website altus.co.uk.

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Michael James

Digital Consulting Director

Financial Services at its very core is just the movement of data from one place to another. Money, units in a fund, transactions, these are all ultimately numbers, so you would be forgiven for thinking that our industry should be easy to automate.

Unfortunately, humans have made this underlying simplicity much more complex, driven by a wide variety of factors from regulation and product rules, to a stubborn lack of standards. Add to the mix a vast array of user devices and interfaces, combined with the complex financial instruments themselves, the result is no longer inherent simplicity, it is inherent chaos. And frustratingly, when we need to change or improve elements of our business, the level of chaos increases exponentially.

As anyone who has attended an Altus Consulting event over the last few years will probably be aware, we are proud to be sponsors of the UK Bobsleigh team. Whilst we are long past our prime as athletes, there are genuine synergies between their approach and ours: their passion and belief; how they have to work so closely as a team; planning and preparation; and a determination to reach the right outcome.
I was particularly inspired when two of the team, Greg and Brad, spoke passionately about how they 'plan for chaos' at a recent event. This immediately struck a chord with me and our Digital Team, with so many parallels to the chaos that our FS clients face.

In the 4-year run up to the Olympics, Greg, Brad and the team maximise their chances of success, and hopefully give themselves an edge over the competition, by actively expecting and planning for chaotic eventualities over that period. A bobsleigh team must spend years preparing to race down a 1200-meter ice track that drops around 300 meters pushing speeds of 120 mph, ideally in less than a minute. This requires a level of bravery, commitment, practice and preparation that is alien to most of us. Despite their best efforts, things can and do happen outside of their control. They cannot ask the International Olympic Committee to move the date of the race because an injury impacted their training schedule, for instance. To mitigate this, they try to anticipate chaotic events which could derail them so that when they do occur, they can reroute to use the time effectively, always getting one step closer to their goal.

When it comes to digital transformation, Financial Services firms would be well advised to 'plan for chaos' in the same way – navigating around the obstacles that inevitably occur in every programme, to continue moving towards their transformation goal. But more than this, with the ever-increasing complexity of our industry, we must now be 'Designing for Chaos', creating businesses with underlying technology that is resilient and adaptable, that can manage the unexpected. These are the concepts we aim to shine a light on in this paper.

Foreword

Greg Cackett

GB1 Bobsleigh Olympian

Life is chaotic. We all know this. Professional sport is not exempt and can take a huge toll on the individual. Physical and mental injury and ill-health can abound for myriad reasons.

To keep ourselves at the top of our game we need to be exceptionally present in the reality that elite sport, for all the joy it brings, balances heavily with intense difficulty and setback.

Preparing for the chaotic nature of sport is essential. Ruthless occurrences such as catastrophic injury during a major event, or having your funding cut, can set back a career by years or end it entirely.

'Planning for Chaos' was a more evocative term I coined to nudge me a little harder when it came to planning my training regime. (I have scaled-up the approach even further now I'm in my sporting twilight!)

I could put together the most beautiful five-to-six-month programme, taking me from early phase general conditioning all the way to peak performance for national selections. It could encompass all the training required to hit speed and power peaks, but what if I tore my hamstring 2 weeks into the first month? Or put my back out a week before selections?

What can I reasonably have in place that becomes an auto-reroute instead of a performance existential crisis so that I never lose momentum? If I tear my hamstring for example, depending on the severity, placement or cause of the tear, I have about four or five different reroutes I can use.

Injuries are part and parcel of sport, but the mental toll can be more debilitating than the physical. Sustaining as much forward momentum as possible is key and the root of that starts with 'Chaos Planning'. As you can see, it's not just a physical approach, a pen on paper action whereby you have different plans of attack for different eventualities, most importantly, it is a mindset.

Accepting this challenge is an essential prerequisite for any budding athlete and it's where we coined the term 'Chaos Planning'. Accepting and planning for chaos in the best way possible, puts you in the strongest position to navigate the rough seas of Olympic endeavour.

Going for gold: Setting clear goals

The pinnacle of our sport is the Winter Olympic Games. As such, our planning and strategy is always delivered in the macro-cycle of an Olympic quadrennium.

In the seasons building towards the fourth year, we undertake a racing circuit called the IBSF BMW World Cup, accruing ranking points that seed us for the IBSF World Championships at the end of the year.

So it goes for three years, World Cup circuit followed by World Championships. On the fourth year, World Cup circuit followed by Olympic Games. Knowing and living within this structure allows us to plan our competitive strategies relatively effectively, but, we are dealing with chaos!

There's nothing more chaotic than training for four years with one date in sight where you need to be at the peak of your powers. And this is just from the physical performance perspective, before we factor in budget constraints, winning sponsors (ahem), logistics, innovating equipment and much more.

Financial Services, perhaps more than any other industry, is susceptible to chaos caused by factors completely outside of its control. There are legal and regulatory pressures, sudden leaps in technology and customer habits, global economic and environmental factors, the list goes on.

To design for chaos, you must first ensure that you fully understand where you are and where you want to be. A baseline model of your business is essential – think of it as a map that shows you the bits you are familiar with, as well as those that you aren't. Business Capabilities make simple, technology neutral, 'components' to help build up that map. You then need to understand your business's strategy, goals and constraints, and construct a Technical Reference model to map out the technology choices which underpin your business.

The aim is to ensure that the solutions you design move the business in the direction of meeting its strategic goals, in a way that considers the constraints. You use the strategy to set the direction for the technology; defining a suitable target state architecture is the most important deliverable.

The key word here is 'suitable'. You need to take the ambitions of the organisation, weigh these up against the constraints and build a target to work to. It's important here that we consider not just the way the business wants to work but also the way it is capable of working.

This gives us an understanding of the technology we need to work towards, simplifying one aspect of the chaos. As we move through this journey of design and delivery, we know that there are a wide variety of factors which can slow down or derail our progress. Maintaining a target state architecture ensures we can respond to these external chaos factors without derailing our journey. If we need to temporarily change our course to respond to a change in regulation, we can do so consciously and always with a view to how we get back to the target.

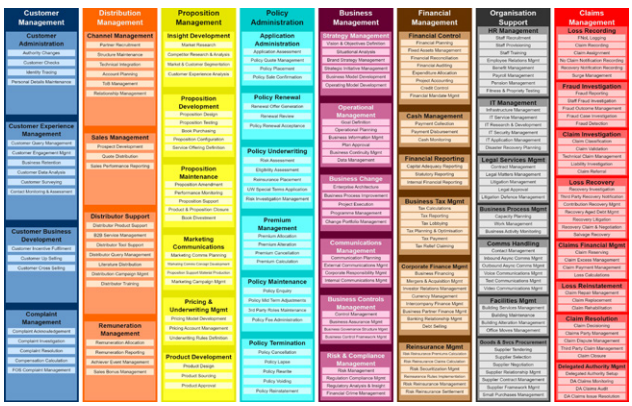

Figure 1 - Altus Personal Lines Model.

One of the challenges of defining a target architecture is maintaining pace with advances in technology. The lure of new, shiny solutions can be tempting but chaos often lurks behind the glossy brochures. Working closely with trusted 3rd parties can help navigate this minefield to stay on course.

Defining our ideal target architecture is actually the most important aspect of delivering the strategy, yet this can be a trigger for chaos. People will line up to criticise and try to derail the target at every opportunity. It is crucial to use the criticism to refine and improve the target state, to ensure it is suitable for the organisation. We must remember that technology is there to enable the business; it is therefore vitally important that we socialise our dream and obtain business buy-in to our target architecture. We should be able to explain the choices we make, based on the goals they support or the constraints they account for.

Figure 2 - Altus Technical RFP Model.

This is sadly where things begin to go awry in the real world. Firstly, the good news, our recent survey of FS institutions discovered that more than three quarters have already defined a target state architecture. Unfortunately, this is where the good news stops. Half of organisations go on to socialise the target with the business, and only 32% use it to govern change against. Failing to govern change against the target state creates chaos and rework, drastically increasing the cost of change.

Just like our bobsleigh athletes, it is paramount to have clarity of vision. This is made possible when we fully understand our business and build a target architecture based on its strategy, goals, and constraints. We must know where we are heading so that we effectively plot our own course to navigate the chaos. Too many organisations start on the right track but then let chaos dictate their future. With some small adjustments we can get back on the right track.

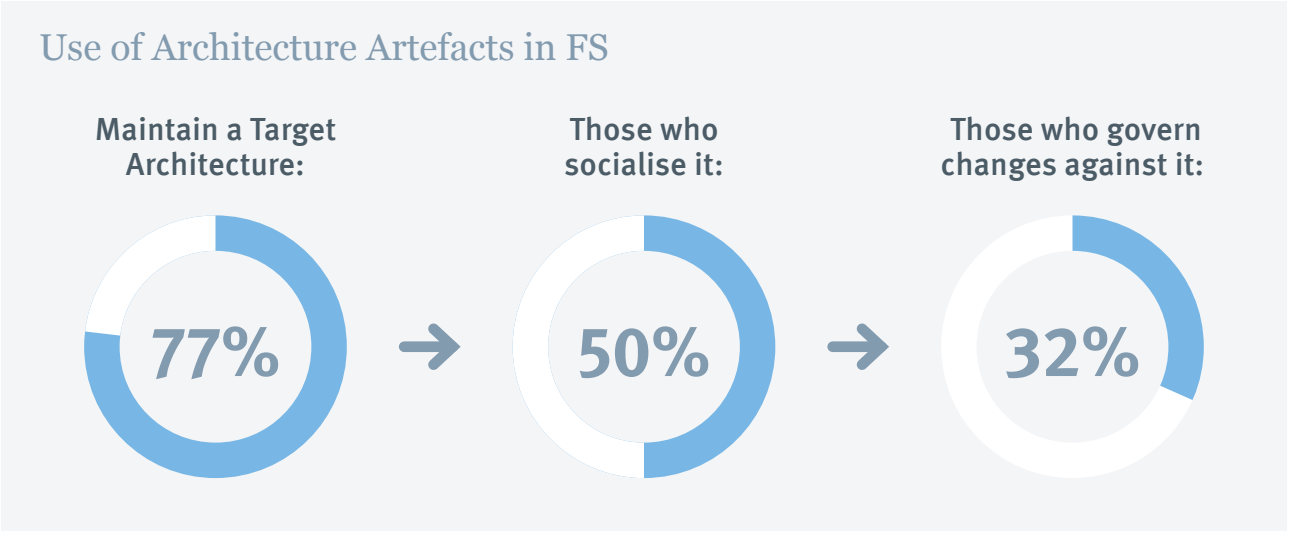

Figure 3 - Use of Architecture Artefacts in FS

Navigating the track

If all is well and we've navigated three seasons of intense World Cup and World Championship competition (and been successful lest we lose funding along the way), attention turns to the Olympic Games.

To ensure we get to the start line, in the best shape, it isn't just about navigating chaos in our physical training programmes; we must ensure that our equipment is ready, tested and shipped to its destination, and that our travel arrangements and accommodation are planned and booked well in advance. Should we fail to plan for chaos in any of these areas then our race could be over before we even get to the start line.

Transformation projects do not have a well-trodden track to follow and as a result they rarely go smoothly. Around 70% of all projects fail (McKinsey) and our recent survey shows that of those deemed 'successful', nearly 75% are either delayed or exceed their budget.

Speak to any change professional and they will have their own views as to why projects fail: poorly defined requirements, resource constraints and scope creep are commonly cited examples. None of these are particularly surprising and following a well governed, structured methodology will drastically improve your chances of getting to the finish line.

Our research shows that one of the most common causes of chaos when it comes to delivering digital transformation stems from implementing 3rd party vendor solutions. We discovered that in over 90% of these types of projects, gaps were identified in the software features which directly led to increased cost or delays.

Software feature gaps are identified in over 90% of 3rd party software implementation projects causing delays or cost increases.

Source: Altus Consulting 2023

To mitigate this risk, most clients will have a structured selection process (RFI/P) which will assess technology fit against the business requirements, with the highest scoring vendor usually chosen. Commercials and timescales are agreed, a plan is baselined, and the project is tasked with configuring the system to meet the business requirements. That sounds perfectly reasonable, so why do we see so many problems? Being brutally honest, because projects cut corners. We tend to take the supplier responses at face value without doing proper due diligence on them, or their technology. Too often we accept the 'it's on the roadmap' line without getting agreement of how or when a particular 'roadmap' feature will be implemented.

To compound this issue, many organisations are so focused on delivering the shiny new system, they take their eye off the outcomes a project is trying to deliver. How many times have we heard "the new system must be live by end of Q3?" rather than something more outcome based such as "customers shall be able to quote & apply for all our insurance products via a mobile app by the end of Q3".

The good news is that by modernising our methodology we can design an approach to navigate this chaos:

Define the desired outcomes of the project.
Defining outcome-based success criteria is important because rarely will a 3rd party solution deliver the end-to-end capability we need to achieve the desired outcome. Often, we need to integrate the system with a host of 3rd party services such as, a CRM, a customer portal and reporting solutions. If we are too focused on the functional system requirements, we fail to consider the wider integration requirements to make a success of the solution.

Define the target state solution architecture before conducting the RFI/P with potential vendors. We should define an MVP at this stage aligned to our priorities, rather than pivot to this when things go wrong and time is running out. This is not additional work; it simply brings the activity forward, ensuring we are in a more informed position when talking to potential vendors. Like our bobsleigh athletes who are laser focused on the Olympic Games, we now have our North Star to navigate by.

Plan for and expect chaos.
Project planning should take a leaf out of the 'Chaos Engineering' playbook. Stop planning for best-case scenarios and start testing your plans using 'what-if' scenarios. Remember, chaos doesn't always spell disaster. Sometimes it forces us to evaluate a problem from a different angle which often results in a better solution than we originally designed. It's important to be prepared to accept and embrace the opportunities chaos presents us with.

Principles of chaos engineering

What is Chaos Engineering?

Chaos engineering is the process of experimenting on a system to improve its ability to tolerate failures in a production environment. It is a technique which can be applied to meet resilience requirements.

Amazon, Google and Netflix have all embraced this engineering approach, with the latter releasing an open source tool, 'Chaos Monkey' which randomly chooses production servers and turns them off, during business hours!

Figure 4 - Principles of chaos engineering

Measure, analyse, improve, repeat

We review performance relentlessly. As an organisation without the many millions of support that our competitors, the German team, receive we have to be as efficient as possible to ensure we get the best return on investment.

To do this we need to evaluate and monitor everything we do, to distinguish what are the causes and differentiators of a good or bad performance. This enables us to target specific areas of our programme and preparation to mimic, enhance or completely change, to achieve a desired outcome. This can become confusing when you obtain a huge amount of data and trawling through every aspect of the data can result in the waste of a significant amount of time. Knowing the key indicators enable you to shortcut that effort and focus on what's important.

In their pursuit of Olympic Gold, the bobsleigh team collect and analyse copious amounts of data. The key for them is being able to trust the data they have captured so they can gain meaningful actionable insight from it. From here they are prepared to change course purely based on what the data is telling them.

In Financial Services, companies have access to terabytes of data and reams of management information reports, yet few can say they derive meaningful actionable insight. Fewer still can react quickly enough to what the data tells them; being able to do so is the essence of a data-driven organisation. Surprisingly, our survey discovered that fewer than 10% of respondents say their organisation is fully data-driven. The majority of FS businesses therefore are not reaping the rewards of using data to make strategic decisions.

By constantly monitoring and analysing our data we can improve all aspects of the organisation, yet we see with many of our clients a wild west of excel spreadsheet chaos, where typically 80% of effort is spent preparing, checking, and double checking the data, leaving just 20% of time to generate reports. But what about time to understand what the data is telling me, to derive the insight or better still tell me what I should do next?

In FS, information from many disparate sources is consumed and combined with varying degrees of success & accuracy. To ensure we make the right data-driven decisions, it is paramount to have a solid base of data on which to run the analytics. The data must be trustworthy and easy to access. Availability of data to the right people at the right time is the first step in becoming a data-driven organisation.

A healthy data environment will have evolving data requirements; a data Governance Framework is essential to help us review and refine the usage of our data.

Our research shows that 25% of organisations have implemented AI and are experiencing benefits. This is balanced by the same number who cannot see the relevance of AI for their business.

The question is, "AI. Which side is your business on?"

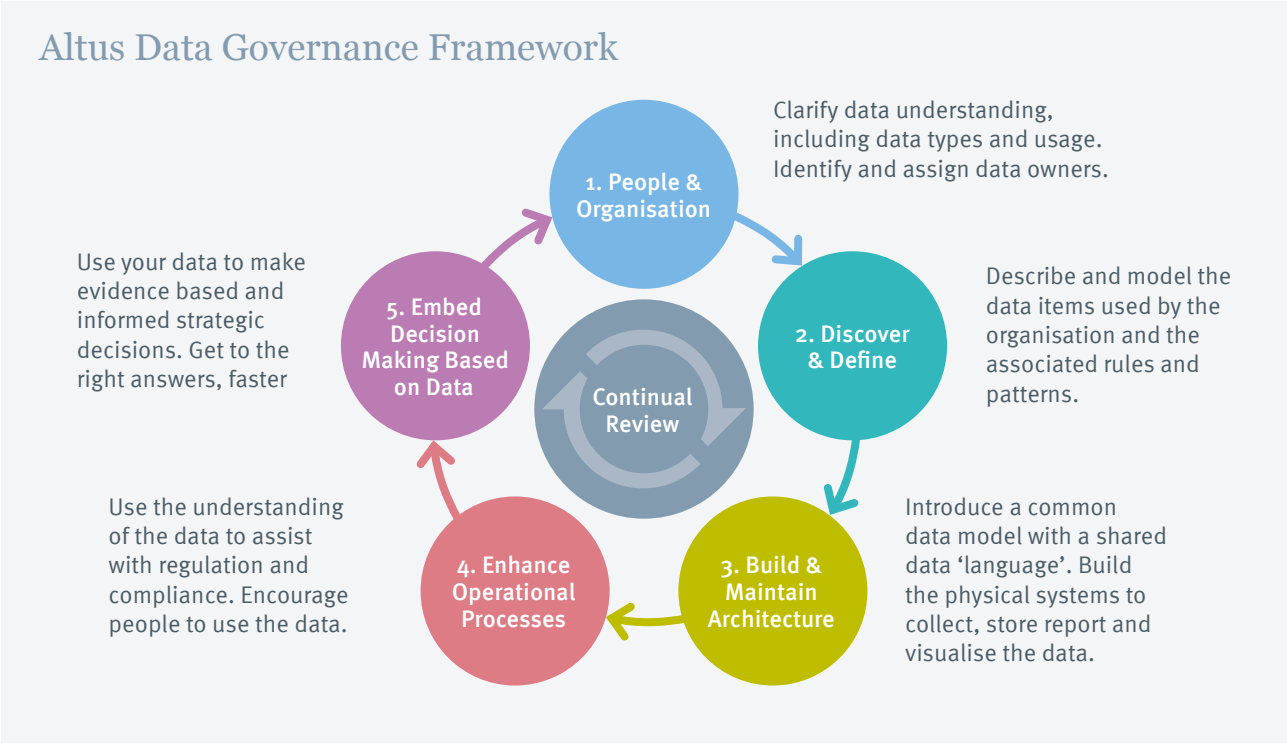

Figure 5 - Altus Data Governance Framework.

Once we have a strong data foundation, we can start generating insights and using it to predict, forecast, and create what-if scenarios, as with the bobsleigh team's auto-reroute tactics. All this can be achieved with Analytics and AI.

Large Language models such as ChatGPT use Stochastic modelling to make connections. Such techniques have been widely used in FS for actuarial and similar tasks, and therefore should be comfortingly familiar.

Analytics and AI, when used responsibly, can be considered as just another toolset. They can help us forecast & identify trends; anticipate and recognise opportunities and threats; and to help us navigate whatever chaos the future throws at us.

The good news is, doing something (anything) now with your data will give you an edge!

AI in the News

Whilst the long-term effects of AI are unknown, it's only as good as the models used to train it. The consequences of bad actors training AI on misinformation, negative or harmful bias could be profound. Governments around the world need to get ahead of the tech, but as we see AI innovators call for regulation, perhaps it is already too late. AI is here to stay, whether we like it or not. It's time we all started to pay attention to it.

Barely a day goes by without a headline of how AI will take our jobs. BT are the latest to confirm that up to 10,000 jobs will be replaced by AI.

Source Sky News.

Ex CEOs of 'Big Tech' and even the AI pioneers themselves are calling for regulation. Emad Mostaque a founder of a British AI company believes that the worst case scenario is 'AI could control humanity'.

Source BBC News.

Recently, a US senator (Richard Blumenthal) used an audio recording to open a Senate hearing into the use of AI within our society. Remarkably accurate and on point, the speech was in fact generated by Chat GPT and the audio was voice cloned using his previous speeches.

Understanding the threats

If we're testing equipment we will try to not promote anything that we discover is working and improving our performance. It only takes one video of the German team sanding runners for the bobsleigh corner of social media to meltdown.

We keep a lot of our innovations in-house because, again, we're fighting an uphill battle against a well funded and well equipped state engineering programme. Every competitive edge needs to be guarded, sometimes we even put out disinformation campaigns to confuse people!

Nothing is guaranteed to create more chaos within a Financial Service organisation than a successful Cyber-attack. The reputational damage of a successful attack can be even more devastating than the direct and indirect financial costs, particularly if it results in a data breach or compromises customer funds.

Capital One were fined $80m in 2020, after they were judged not to have adequately protected their customers' data, resulting in the attackers obtaining 106m customer and applicant records.

If you think "it's ok, we are not being attacked" you are almost certainly wrong. You should certainly drop the complacency! Cyber-attacks are happening all the time, to all of us. The threats are constantly evolving and are not just limited to the malware, phishing and supply-chain attacks which commonly cause a chaotic and often ill-prepared response. Often overlooked and dismissed as a problem that only happens to other organisations is the Insider threat. Disgruntled or rogue employees can wreak absolute havoc with unfettered access to customer accounts and data, often exploiting legacy systems which lack adequate controls and monitoring capability.

Spending on cyber security is an investment in your systems, data, and reputation. More than **half of firms surveyed self-report that they are under-investing in cyber security.**

Source: Altus Consulting 2023

Crime does pay.
Cyber-crime has grown to be the world's third largest economy after the US & China.

Source: World Economic Forum

Criminals will exploit any vulnerability they can find, and they only need to be successful once to destroy your brand reputation. You must be successful in defence 100% of the time. To make matters worse, these criminals are well-funded. The dark web provides them with easy access to malicious tooling and terabytes of compromised user credentials. 'Cyber-crime as a service' is a growing problem facing our industry.

The UK National Cyber Security Centre (NCSC) noted in the earliest days of the pandemic that cyber-criminals took advantage of confusion and uncertainty to trick victims. These criminals use a combination of new technologies as well as old tricks, playing on fear, uncertainty, and lack of attention, the key ingredients of chaos.

Our clients typically suffer a higher intensity of attacks immediately after propositional launches and major system releases. Attackers probe new systems' defences for exploitable weaknesses as the moment of greatest vulnerability is immediately after these events.

Cyber Security defence isn't just a BAU challenge. Projects have their own part to play, but this requires a culture and methodology change whereby security is considered at the outset and throughout a project. We talked earlier about 'what-if' scenarios; projects must ask themselves "how could a cyber-criminal exploit this solution?"

This may seem an impossible task against a backdrop of ever-changing threats and changes to the minimum-security standards, yet there are some practical steps which transformation projects can take to ensure they play their part in the war against cyber-crime.

- **Engage with cyber teams from the project outset.** We have all experienced security blockers at the critical delivery phase, particularly apparent in long-running programmes, these seemingly 'unpredictable' events appear to be thrown in at the last minute. These are not the random events they at first appear, and had we simply engaged with the security experts at the outset could have been entirely avoided.
- **Foster a 'secure by design' culture in the organisation.** Project plans must include capacity for penetration testing & security remediations from the beginning. Rather than it being a last-minute inclusion with no contingency to remediate any vulnerabilities.
- **Embrace new technology.** A primary attack vector for cyber criminals, either through technological or social means, is obtaining the authentication credentials of a user. Whilst MFA goes some way to strengthen this threat, significant innovation continues in 'passwordless authentication'. With the recent Google/Apple/Microsoft developments for common standards, this is an area we will see becoming more widely used for both internal (staff) and for external (customer) IDAM solutions.
- **Invest in cyber security systems.** To form an effective defence, we must know where the attacks are coming from. Organisations must perform Security Incident Event Monitoring (SIEM) and ensure that new projects provide data from its systems to facilitate it, particularly where those systems contain personal data.

Security doesn't start, or end, with your Cyber security team. Cyber incidents create chaos. Projects and programmes are responsible for the design and implementation of secure, resilient solutions without introducing new security vulnerabilities. Planning for and war-gaming such events as part of your project delivery will ensure the impact of any security incident on your organisation will be less, and the recovery faster.

Organisations which detect lower numbers of cyber incidents are more likely to have suffered a suspected or actual data breach

Source: Altus Consulting 2023

Marginal gains: Optimising equipment

Travelling the globe, we try to limit the amount of equipment we take away. Too much equipment is more work and hassle to deliver, maintain and unpack.

This can affect physical performance in quite a big way. One year we had an athlete tear a bicep moving a sled from a van, and it wasn't even a sled we used. There's a high risk of damage to equipment as well, plus expenditure on fuel as our vans can become extremely heavy.

It isn't just the world of Olympic Bobsleigh where it's crucial to have the right equipment. Making the right infrastructure choices can be the difference between being able to react to chaotic events with little to no customer detriment, and to being on the front pages of the national press in the latest FS technology scandal.

Our survey reveals a surprising overreliance on traditional 'Infrastructure as a Service (IaaS)' solutions, suggesting that many organisations are lagging behind in the adoption of more innovative and flexible cloud services. The competition is not standing still. Everyone is on the Cloud journey and to gain an advantage, you must utilise the appropriate technical innovations available in the Cloud which would otherwise be out of reach of most budgets.

Today, you can build and deploy solutions far quicker than ever before, using Cloud FaaS components via simple API calls such as Open AI (ChatGPT); PaaS components including full cloud platforms such as Data and Reporting or SaaS offerings such as Salesforce.

Over 85% of our clients stated Cloud costs were the same or lower than they expected

Source: Altus Consulting 2023

As we have determined earlier, anticipating chaos is challenging. Fortunately, Cloud comes to the rescue when it comes to many projects' nemesis, the dreaded Non-Functional Requirements (NFRs) of scalability, performance, resilience, etc. Our research discovered that fewer than 2 in 5 projects consider NFRs properly. Public Cloud providers are helping us improve delivery of these requirements, i.e. those that the customer does not see but which significantly impact their experience.

No matter how much analysis a project carries out, scaling your solution for predicted volumes which either do not occur or are vastly exceeded (for example by the once in a decade storm resulting in a mass influx of insurance claims) is almost impossible to predict accurately. Cloud provides the ability to scale on demand with no hardware footprint, allowing you to respond quickly. With the move to serverless (Platform and Function as a Service) it has never been easier.

Whilst a 'cloud native' architecture can bring big benefits to your project, leveraging the potential of the Cloud demands careful consideration. It isn't without its drawbacks. Unique project requirements, contractual obligations, regulation & cost are also key factors which will help you determine the suitability of a Cloud native architecture:

- **Securing the Cloud** – As we have seen in the previous chapter, the price of security breaches can be high. Cloud does not take away that responsibility – you need to be clear on the cloud security shared responsibility models to ensure the security of your solution.
- **Project requirements & contractual considerations:** Your project may have very specific data hosting requirements (due to data sensitivity or a customer contract) that insist on an on-premise, named data location, which limits your options for Cloud. These are vital to understand as early as possible in your project and consider alternative solutions.
- **Regulation:** Regulators are beginning to shine a light on FS companies' reliance on the big cloud providers and the associated risks of being dependent on a single supplier. Exit strategies are key and must be considered when designing solutions as they could introduce additional cost and complexity.
- **Cost:** One of the key benefits of Cloud computing is the ability to control costs by only paying for infrastructure as and when you need it but you do need to be aware of the potential downsides, for example poor management of your Cloud tenancy could result in charges for components which are no longer being used or bill-shock from transaction costs which, on face value, appear cheap (being priced on a per transaction basis at fractions of pence) but over time can run out of control.

The resilience, advanced features, economies of scale and technical excellence brought by the Cloud providers remove the heavy lifting from our projects enabling us to focus on delivering our strategy and responding quickly to the unexpected. By establishing a well-defined roadmap, complete with architectural guardrails, organisations can confidently navigate the optimal path to fully exploit Cloud capabilities and effectively adapt to today's increasingly fast moving and chaotic world.

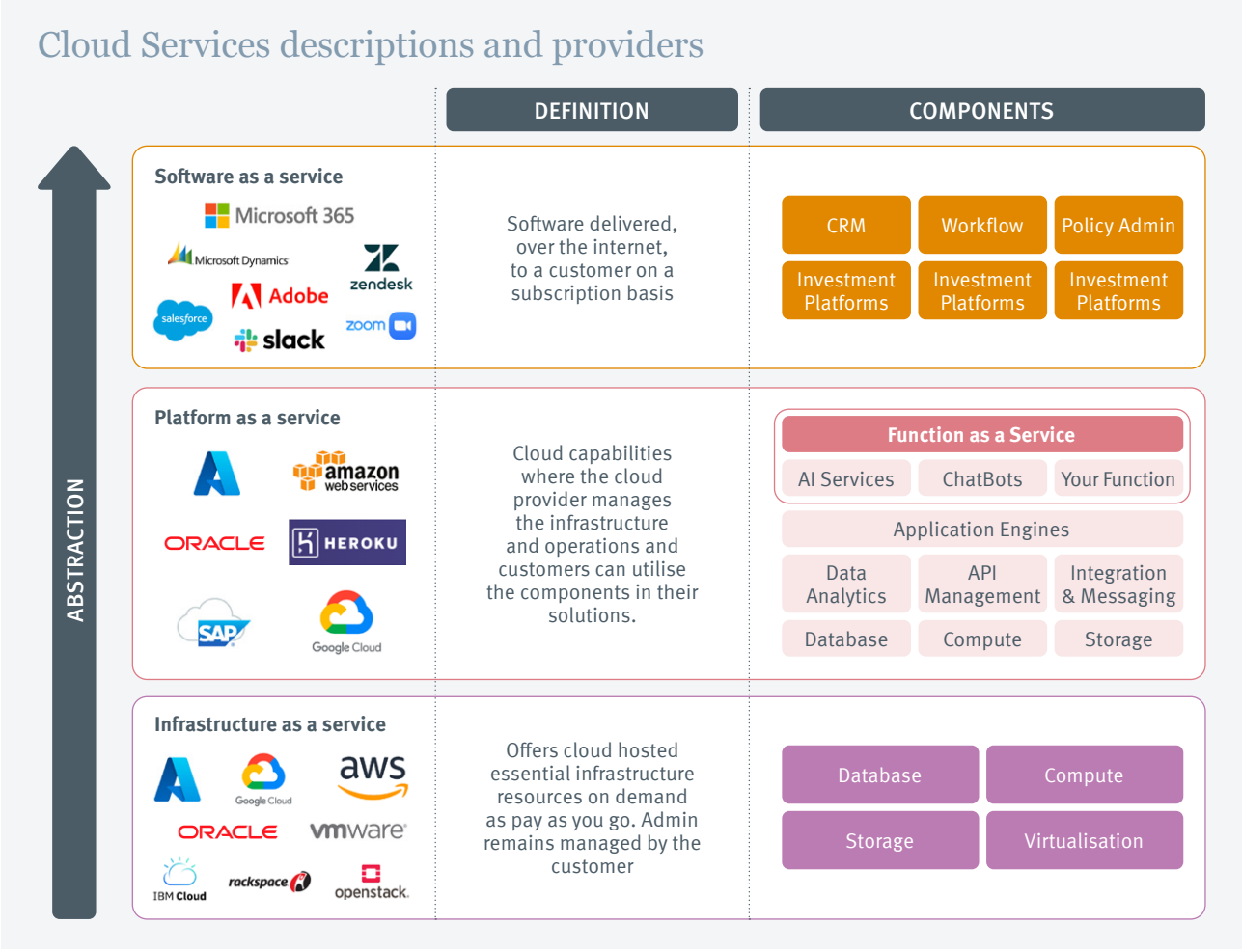

Figure 6 - Cloud Services descriptions and providers

The medal ceremony

Planning for Chaos materialised from the need to develop contingency within our training programme. We have now scaled up the approach to apply across our entire programme. Preparing for the chaotic nature of sport is essential.

Although physical injuries are part and parcel of our sport, the mental toll can be even more debilitating. Sustaining as much forward momentum as possible is key to success and the root of that starts with 'Chaos Planning'.

By inspiring this mindset in your organisation will ensure you stand a great chance of keeping people on board whilst you navigate the seas of change! (To quote another Altus whitepaper!)

Anyone involved in change in Financial Services will be familiar with the chaotic landscape they deal with, from regulatory changes to the implementation of new technology solutions. A good example is the uncertainty around the direction and timeline of the Government's Pension Dashboard initiative, with firms trying to deliver projects and achieve compliance against a stop/start backdrop.

To improve your chances of navigating the chaos, you must have absolute clarity of your destination; the vision and strategy to reach this destination needs to be clearly articulated and bought into across the business to ensure everyone is working to a common goal. This strategy must be founded on sound business principles, which are then used to govern your business and technology.

By placing timely, accurate data at the heart of your organisation, you can rely on it to inform the decision-making process and to help anticipate and navigate chaos (utilising advances in AI tools to help). These elements combined provide the North Star, and that clarity of vision which is essential to keep you and the business on track.

A business and its technology are at their most vulnerable immediately after a change has been introduced. Implementing a 'think like an attacker' or 'Chaos Monkey' mindset will ensure you deliver robust systems and services able to withstand the worst our industry can throw at us.

Cyber-attacks can be an existential threat to your business, and projects must do their bit to ensure they don't introduce new vulnerabilities into the business. This is especially important when utilising the offerings in Cloud technology, which can help you to deliver scalability, performance & resilience requirements to protect you from some of the external chaotic elements of your day-to-day operations.

If you build a business based on solid principles, governance and capability, facing chaos head-on can turn it into an opportunity, a disruptor to drive innovation. The pandemic has shown us that when necessity forces us to, we can respond by finding solutions to our problems, and implementing them quickly. The digitisation of customer journeys or the shift to homeworking en-masse are clear evidence of this.

So fundamentally, you must build a resilient business which is prepared for and embraces chaos. Because only in chaos, does innovation truly thrive.

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Altus Consulting whitepapers

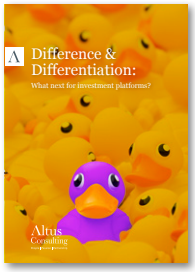
With our focus firmly on the regulatory, strategic, propositional, operational and technological challenges our clients face, Altus understands the most pressing issues for financial services. We publish market insight, industry commentary and are at the forefront of industry debate.

CHANGE STRATEGY

Navigating the Sea of Change

Embarking on any change journey can be a daunting prospect. In this Whitepaper, we provide practical insights for organisations facing the mounting pressure of delivering ambitious and complex change programmes in today's dynamic business environment.

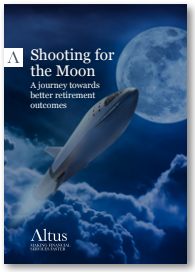
INVESTMENT PLATFORMS



Difference & Differentiation

Nearly a quarter of a century since the concept of Investment Platforms arrived in the UK. With more and more investment solutions being delivered through this model we explore what is the difference between a platform and a product provider, and what will the next 20 years hold?

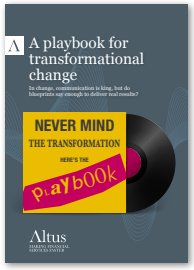
RETIREMENT OUTCOMES



Shooting for the Moon

'Shooting for the Moon' provides an in-depth analysis into latest initiatives – the Consumer Duty, Pensions Dashboards and Value for Money (VfM) in DC pensions – in the Regulators' attempt to deliver a truly mass market pensions system designed to deliver good outcomes for all.

LLOYD'S OF LONDON



A playbook for transformational change

This whitepaper sets out the need for Lloyd's of London to create playbooks' for transformational change if it is to survive and thrive amidst growing challenges and competition.

AUTOMATING ADVICE

The Buy, Build or Integrate Debate

The second in our 'Reimaging Financial Advice' Series – 'The Buy Build or Integrate Debate' examines what the emergence of global best-of-breed CRM tools means for the UK advice tech landscape, how achievable the curation of an ecosystem comprised of specialist tools is, and whether all-encompassing practice management solutions still have their place.

NO CODE / LOW CODE TECHNOLOGIES

No Code Low Code Technologies – What's all the buzz about?

How can Financial Services providers accelerate digital transformation, to not only catch up with other sectors but also to drive ahead at rapid pace?

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