

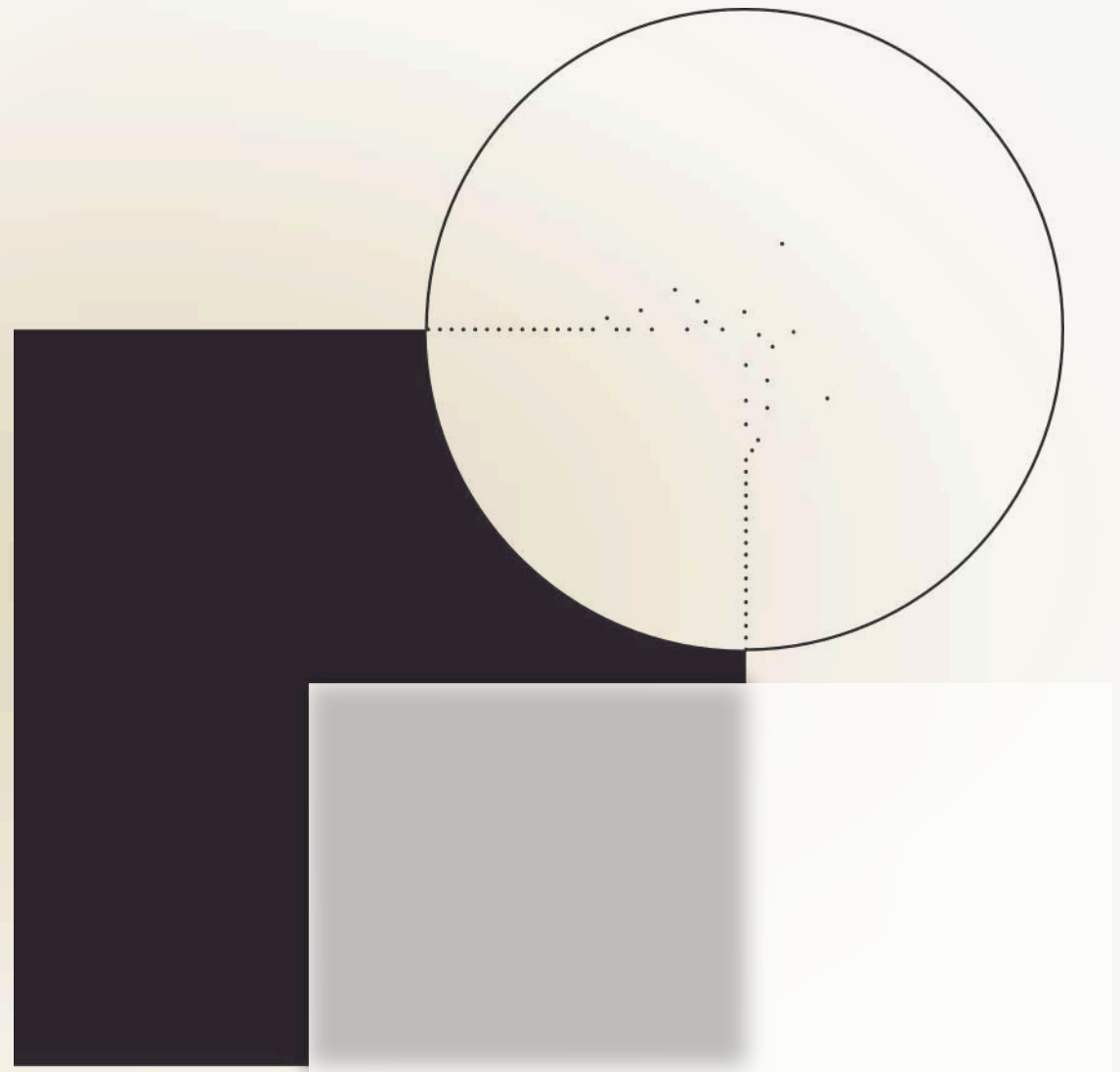
SCENARIO BOOK

Technology Transition



Fast flow of customer value requires a contemporary technology system that's free of legacy constraints. What are these constraints and how can they be fixed?

HYPR



Your scenario?

- You want to ship what customers want now and meet their changing needs tomorrow
- You know that delivering this flow of value requires a modern, friction-free software system
- Your existing system is highly constrained. It's like a tangled up fishing net
- You've tried any number of approaches to free it up but you don't seem to be making enough progress
- You're not confident about what to do next because whatever you do might make things worse
- You're pressured to change fast but the resources don't match the impatience. And the investment priorities seem skewed in the wrong direction

This Scenario Book talks about transition from a tech perspective. It's equally about people and the ways they are organised and work too. The people perspective is covered in our other Scenario Books.

“We want a system of frictionless software change... to change without constraint... so that we can bring great ideas to life fast”

The patterns we see

Transitioning old application portfolios to a contemporary, friction-free system is complex and challenging. When we look deep inside most organisations, we see a tangled net of knotted-up technology. Prior modernisation efforts struggle because:

- They take a narrow, project-based view that fails to align with the enterprise's wider technology landscape
- They take a 'band-aid' approach that focuses on solving problems expediently rather than tackling the underlying factors that cause the problems in the first place and critically...
- Their effort is focused on transforming technology rather than finding and unlocking VALUE that aligns with business priorities

This is now true for both enterprises that need to move from legacy systems and high-growth startups whose portfolios are rapidly becoming 'legacy'.

The negative effects on flow

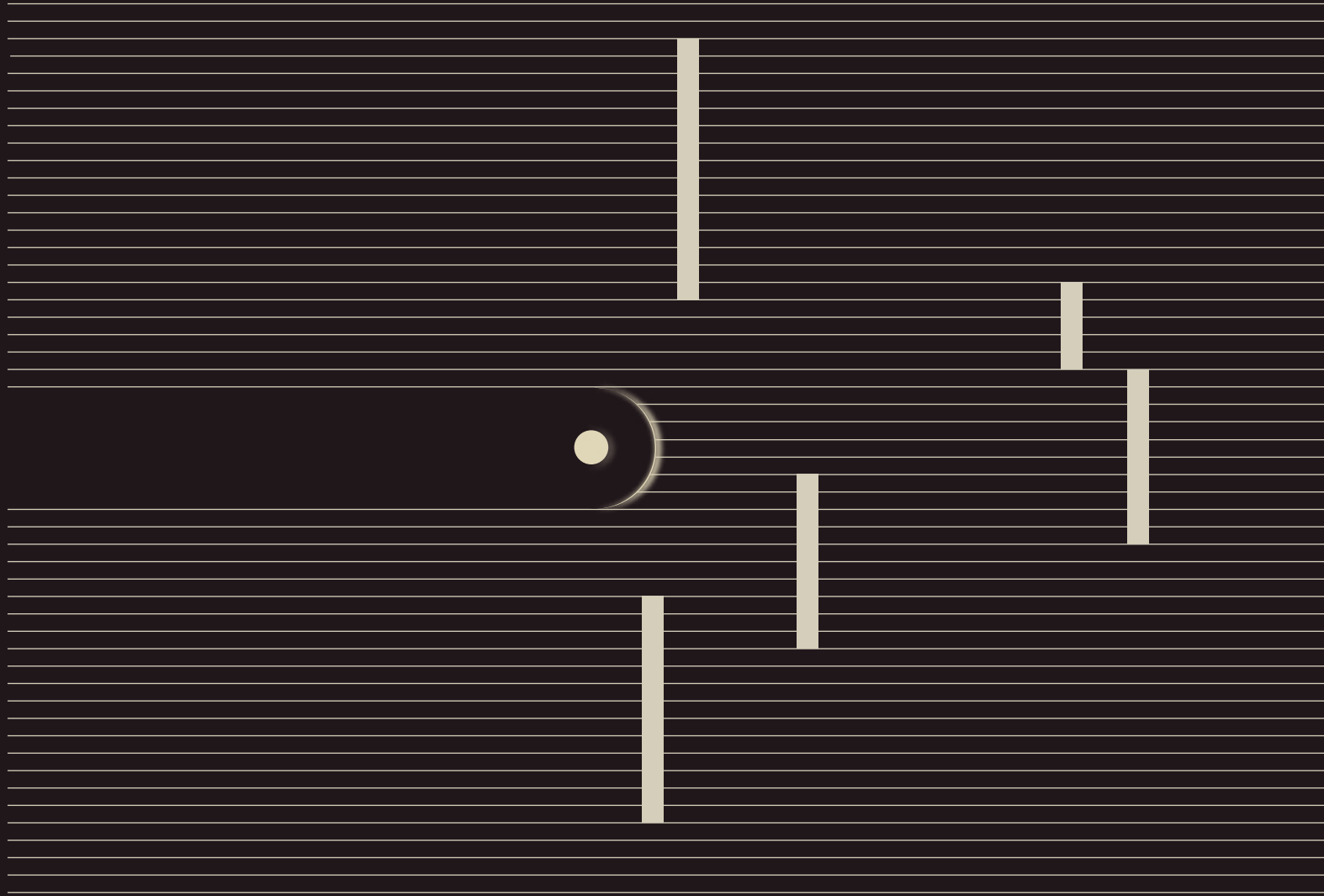
Every day, we hear of a product team being constrained by technology. You may be familiar with these challenges:

- Concept to cash takes too long
- Quality is suffering
- Your system can't easily adopt or adapt to new technologies
- Your system can't easily meet changing compliance requirements
- You cannot deploy working code to production, safely and at will within a few minutes
- Your system can't scale in tune with demand
- You're not able to make better use of data

...there are dozens more, of course!

“We have significant technical debt, scalability issues and quality problems. We can't offer more value to clients at an acceptable rate. Our competitors are catching up with us fast”

Product company CTO



Why does it happen?

We see five ‘Complex Technology Constraints’ (CTCs) which affect the flow of value. They arise because of how the enterprise has created and used technology over time. Recognise these?

“We’re constrained by a never-ending cycle of ‘technical debt’. We don’t have the time to truly fix it so it’s just one expensive patch after another”

Product company CTO

01

LEGACY SYSTEMS

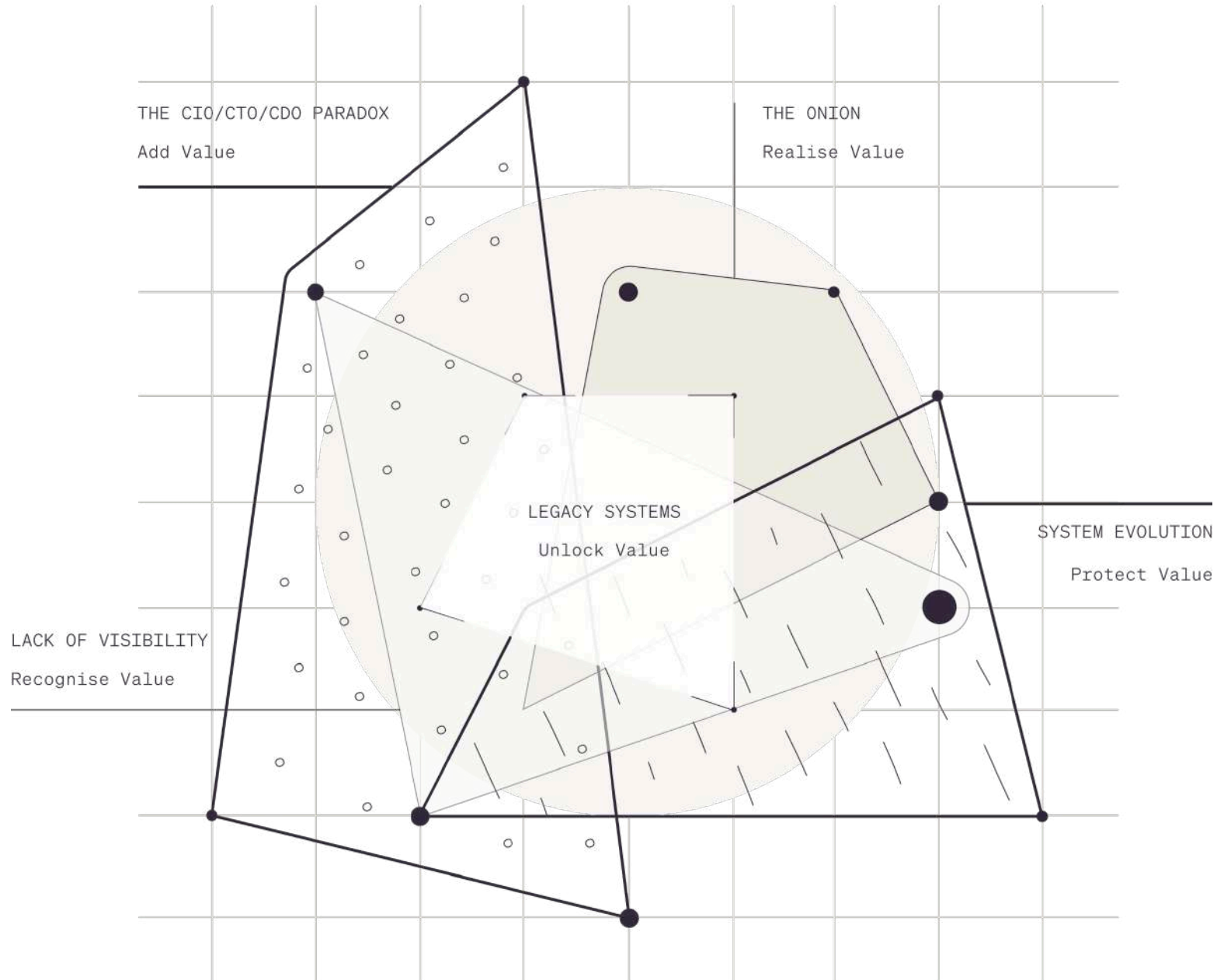
Complexity and technical debt locks the value of data and code as the system evolves. Prior attempts to move from old systems haven’t tackled these underlying factors. Ad hoc, band-aid approaches have added to the problems.

02

THE ONION

Historic delivery of initiatives has added layer upon layer to the system architecture. The technical debt burden has reached unsustainable levels.

COMPLEX TECHNOLOGY CONSTRAINTS



Loosening these Complex
Technology Constraints
untangles the net to deliver
value for the business

03

THE CIO/CTO/CDO PARADOX

Competition for resources between innovation initiatives and operational initiatives has compromised the design of the system. It's hard to find the fastest path-to-value for customers.

04

LACK OF VISIBILITY

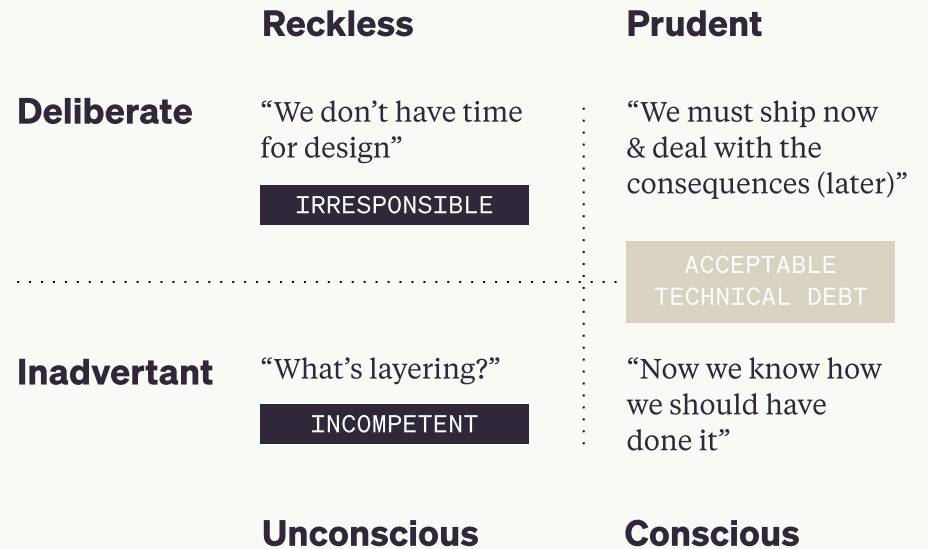
The system has become so complex that you can no longer see how work flows through it. Internal conversations about the state of the delivery system don't seem to reflect customers' reality. There are no common metrics allowing everyone to gain a common understanding of how work flows from idea to customer.

05

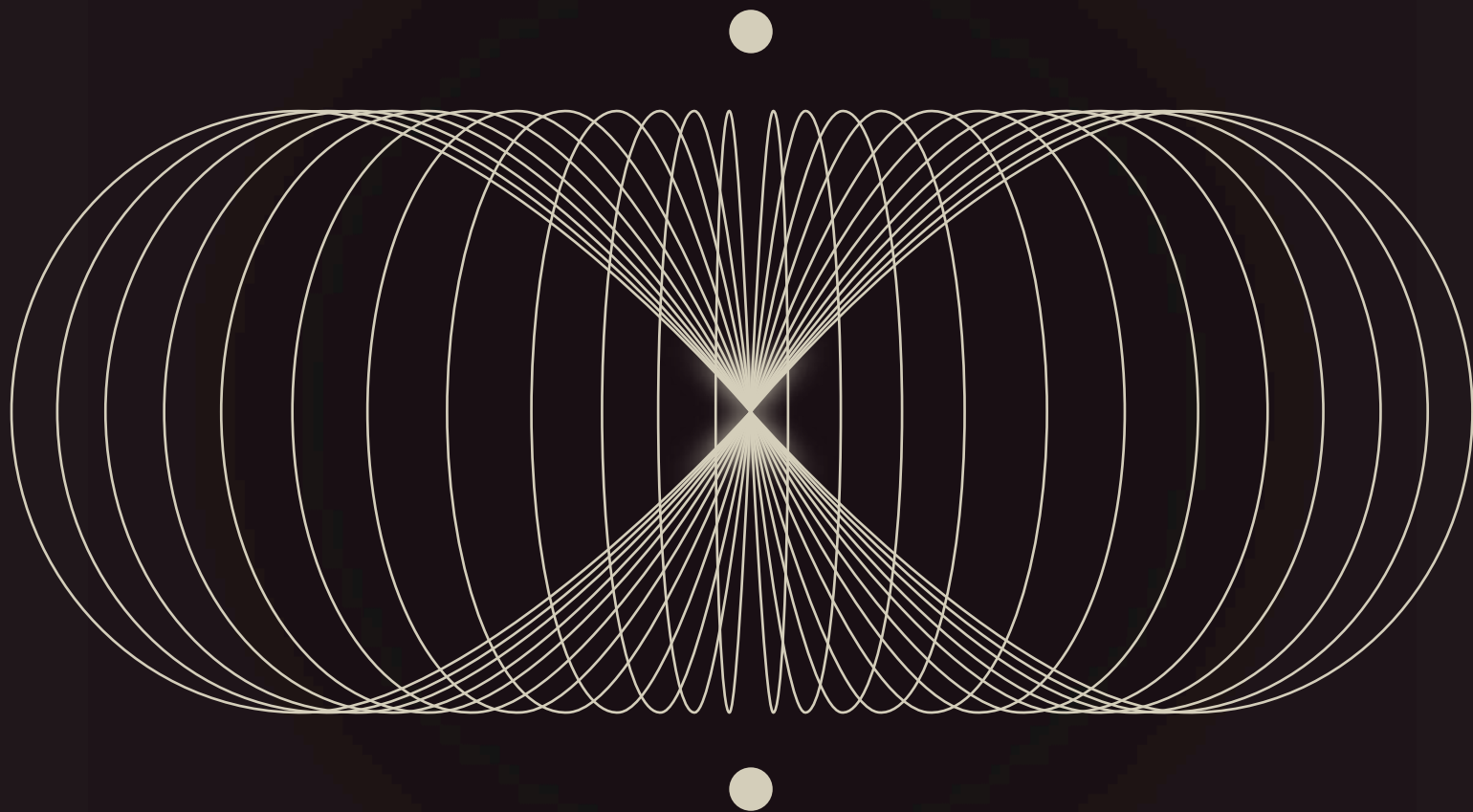
SYSTEM EVOLUTION

The system was built around rigid technologies and architecture which could not adapt easily to change. Workarounds introduced more complexity, debt and risk of failure.

TECHNICAL DEBT QUADRANTS



Adapted from Martin fowler.com



What good technology looks like

You have a contemporary product platform that product teams can't wait to jump onto. Value that once used to take months to deliver with the legacy system now takes a fraction of the time. Your system offers adaptability to accelerating changes in requirements:

- Evolutionary architecture, scalable on-demand
- Clear separation of concerns
- Components that can be independently deployed including feature flag management to decouple deployment from release
- Cloud-based
- A robust, flexible ecosystem with all the non-functional requirements (security, observability, performance, reliability, maintainability)
- Membership in an API ecosystem for clients, partners and suppliers
- Visibility of customer value



Our approach to improving your technology system

Tackling constraints in a 'big bang' is daunting and risky. We advocate transition 'over time'...

Business-driven, continuous modernisation

We take a step-by-step approach to 'extract' a high-business-priority, discrete service, domain or functionality and transition it to a new contemporary system.

We fix the underlying factors that cause the constraints for that service and only to the extent needed. Then we move to the next priority.

Over time, this achieves a continuous modernisation of the system that's aligned to business priorities.

With patience and a modernisation mindset, we know this can be done successfully. It's what we specialise in.

Discovering your context and priorities

Understanding your system in a business context. The key questions:

What does the system need to deliver for your business?

What's your vision and strategy and how are existing tech investments aligned to business goals?

How committed are you to making the system a central part of your ability 'to change the marketplace' and adapt to changes in the marketplace?

How open are you to considering a governance model for your system investment that is focused on customer value rather than cost alone?

How can the legacy system evolve to better deliver both new value from disruptive innovation, as well as add value in operational initiatives?

How might we better consider competition for resources between innovation and operation?

The Baseline Audit

We look deep into your existing system to create a technology baseline. We identify the constraints likely to impact on any transition. We learn about your:

- Goals and outcomes
- Technology stack
- Toolset
- Architecture
- Code
- Data
- Quality practices
- Delays, bottlenecks and impediments to the flow of value
- Team topologies
- Pathway to production

You can read more about baseline audits in [our Situational Analysis Scenario Book](#).

Identifying your priorities

Because transition should be aligned to business need, your starting point should be a high-value business priority – a service or domain that represents the ‘fastest path to value’. We create a high-level model for that (based on a product or Value Stream) and identify the dependencies and constraints impacting it across the tech stack.

Begin the transition

Plan to extract

We work out how to extract the priority service, loosen the constraints and define the minimal ecosystem that needs to be built to support it. The aim is to non-intrusively move services to the cloud ahead of their dependencies to minimise risk.

Extract and automate

Working as a hybrid team, we help you extract the service with good clean code and develop a high-maturity, automated delivery pipeline for the service. This includes quality practices such as automated test suites to ensure fast flow.

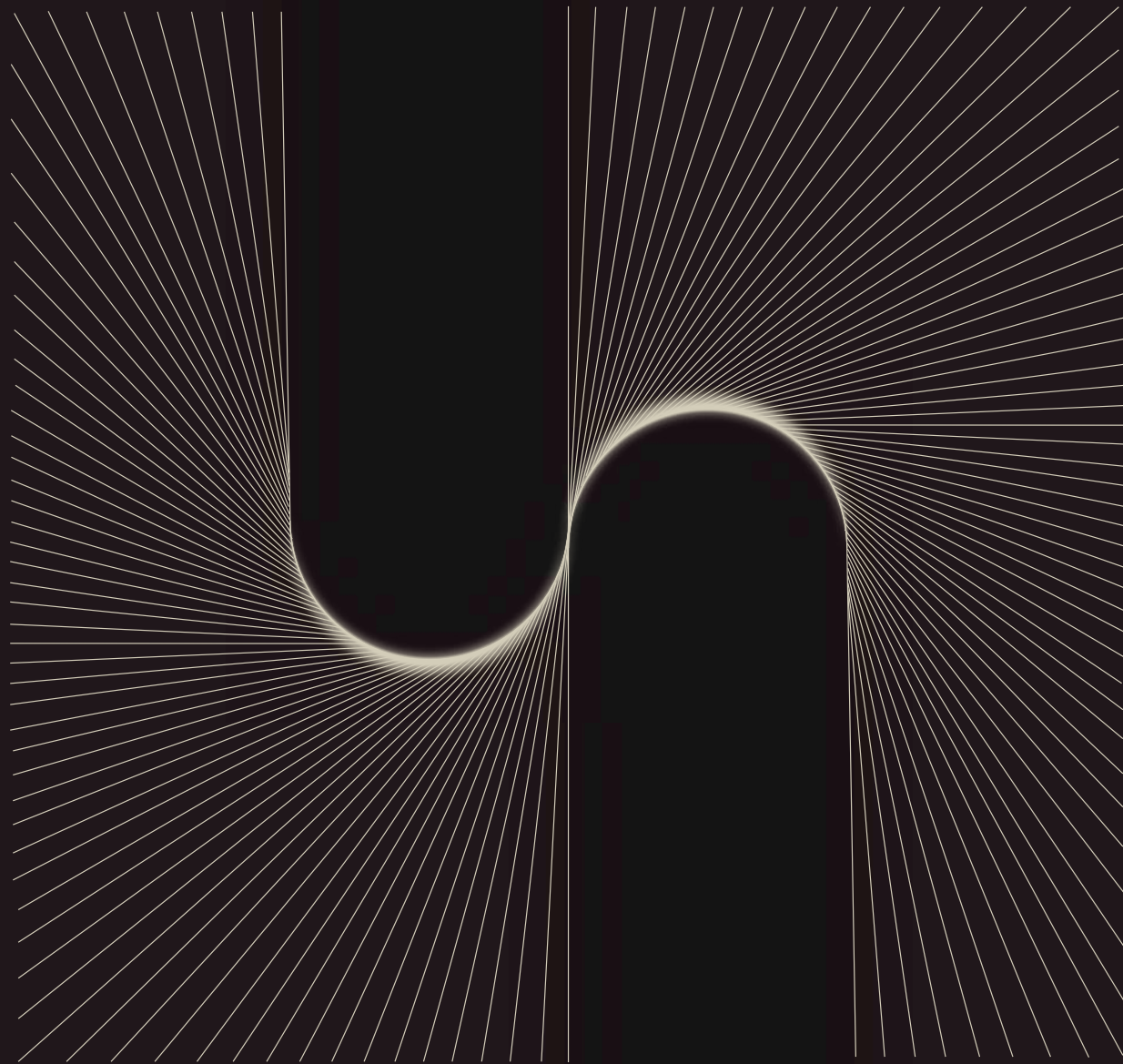
Assess and repeat

We assess what’s been achieved. Is it a proof statement for what great looks like? Does it show you the path to a new normal? If, so then let’s repeat this with the next priority service, using everything we’ve learnt. Your transition is on.

Identifying and removing other delays in the system

In our transition technology work, we always see other delays to flow and paths to improvement. Many of these are covered in more detail in our other Scenario Books. In brief:

- Use of Site Reliability Engineering (SRE) to improve automation and resilience
- Use of Continuous Delivery to build pipelines which transform source code into viable products
- Use of Infrastructure as Code to reduce provisioning delays and improve workflows
- Use of instrumentation to improve the observability of systems and applications
- Use of metrics to understand if improvements are successful or not



Reducing risks in transition

Transitioning to a contemporary system is a challenging but rewarding journey. Here are three of the critical success factors we see in our work.

Fastest path to value

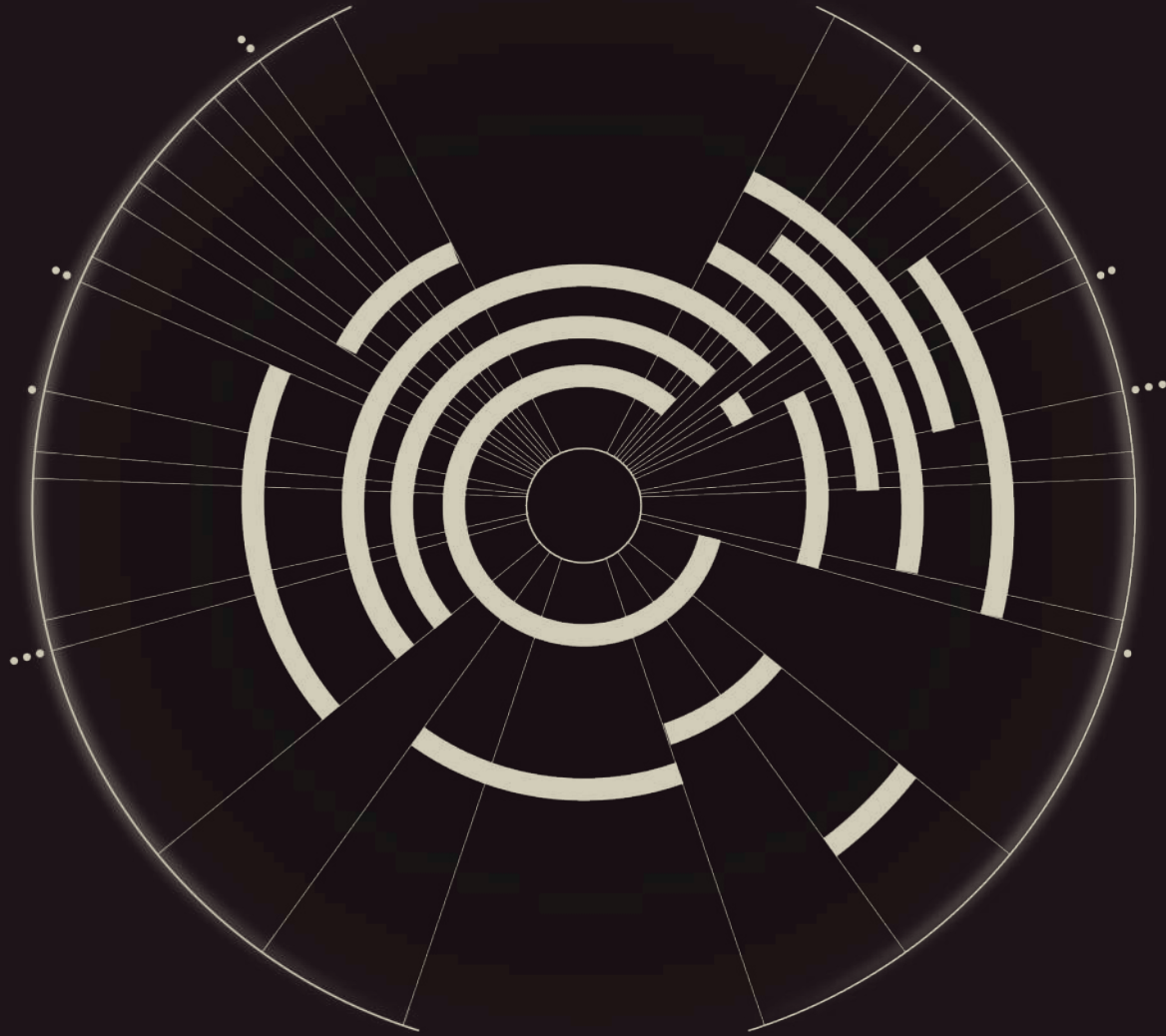
Given what's known, what's the 'simplest possible thing' that can be done first to deliver customer value. Finding that is the key problem to solve (as opposed to a technology-only problem).

Customer first

Make sure you're building the right thing for customers. Ensure teams have the skills and tools to continuously validate and discover. Check out our [Continuous Discovery Scenario Book](#).

Bounded Contexts

A monolithic system entangles entire business domains into a single large component. It should be split into smaller ones. This helps facilitate testability, encapsulation, shorter release cycles, decoupling and more.



Why HYPR?

Our purpose is the 'Pursuit of Relevance'. We're here to help you accelerate the flow of value delivered to your customers so you can thrive in rapidly changing times.

■ What makes us different?

Focus on flow – Progressive enterprises are focusing on finding and removing delays from their system through the practice of Value Stream Management (VSM). We're a leading VSM consultancy helping enterprises in NZ and Australia.

Systems thinking – We take a systems-thinking approach to avoid local optimisations that contribute little to the whole.

Focus on your people – Technology and people are one system and two sides of the same coin. We focus as much on the social constructs and human networks as we do on the tech.

Transition not transformation – Your enterprise operates in a VUCA (Volatile, Uncertain, Complex, Ambiguous) world. It needs to keep flying while making changes. We know from experience that transition is the only way you can do both.

Our people – We're a diverse team with shared purpose and values. We have extensive skills across our consulting lines, from the very best software engineers to strategic experts able to engage at board level. They have lived at the coalface of change.

We're ready to help

HYPR

We're experts in helping enterprises transition from legacy tech to accelerate the flow of customer value. If this sounds like the help you need, let's talk about your specific requirements. Call us now...

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