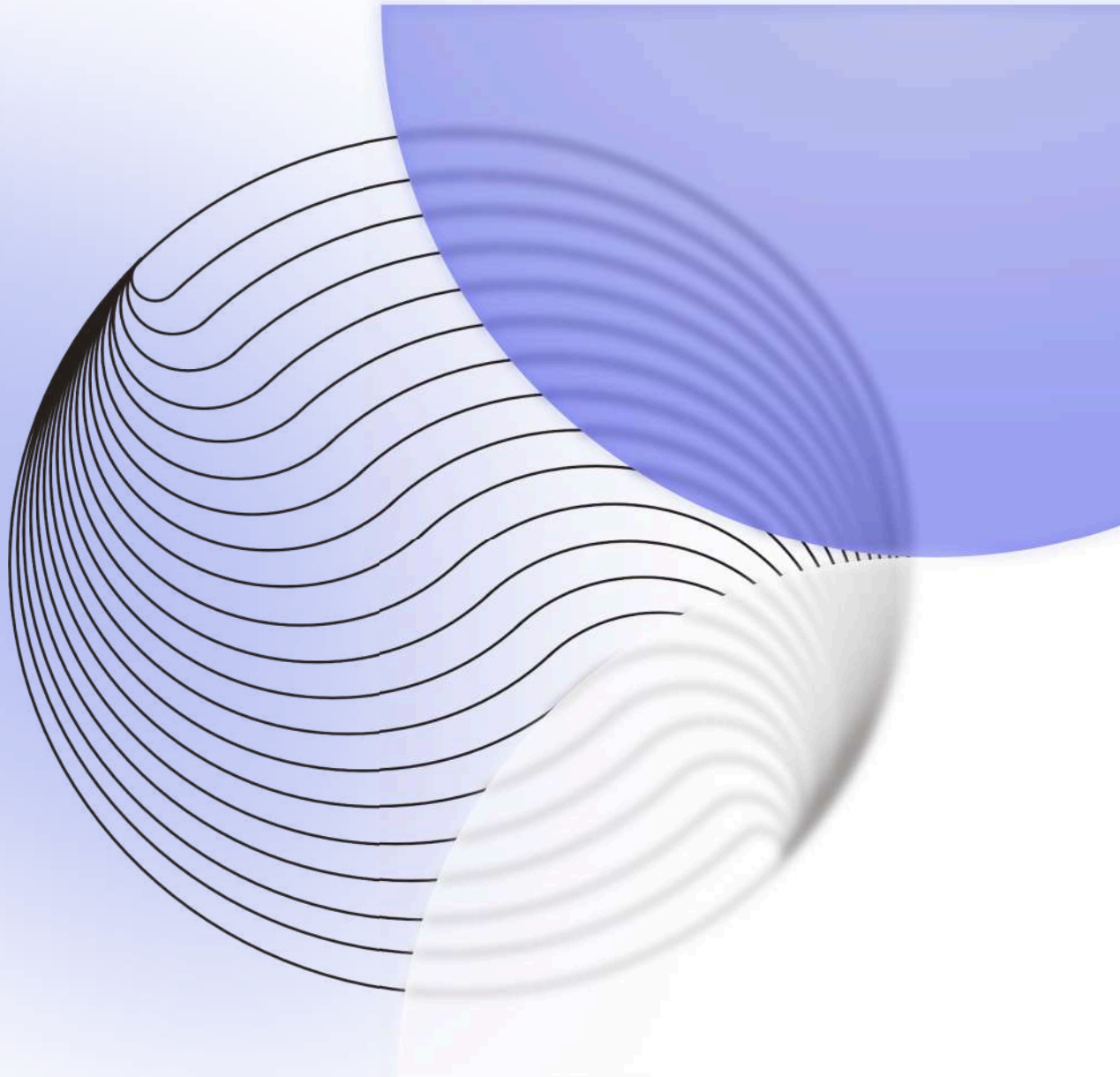
SCENARIO BOOK

Optimising Flow

Most enterprises aren't measuring the end-to-end flow of customer value delivered by software – so they can't see where the true bottlenecks are. Accelerating flow depends on actionable metrics. Do you have them?



HYPR

Introductory notes

DORA and Flow Metrics®

We use both DORA* metrics and Flow Metrics in our work. While both are essential components of a holistic metrics programme, this Scenario Book is focused on Flow Metrics. For the record, here's the difference between DORA and Flow Metrics:

DORA metrics provide *engineering teams* with measures of efficiency and stability, helping them to strive for operational excellence.

Flow Metrics provide *multiple stakeholders across the business* with measures of how value is moving through the value stream of a software product. Flow Metrics help teams and teams of teams strive for better business outcomes and facilitate better decision-making.

Flow Metrics® and the Flow Framework®

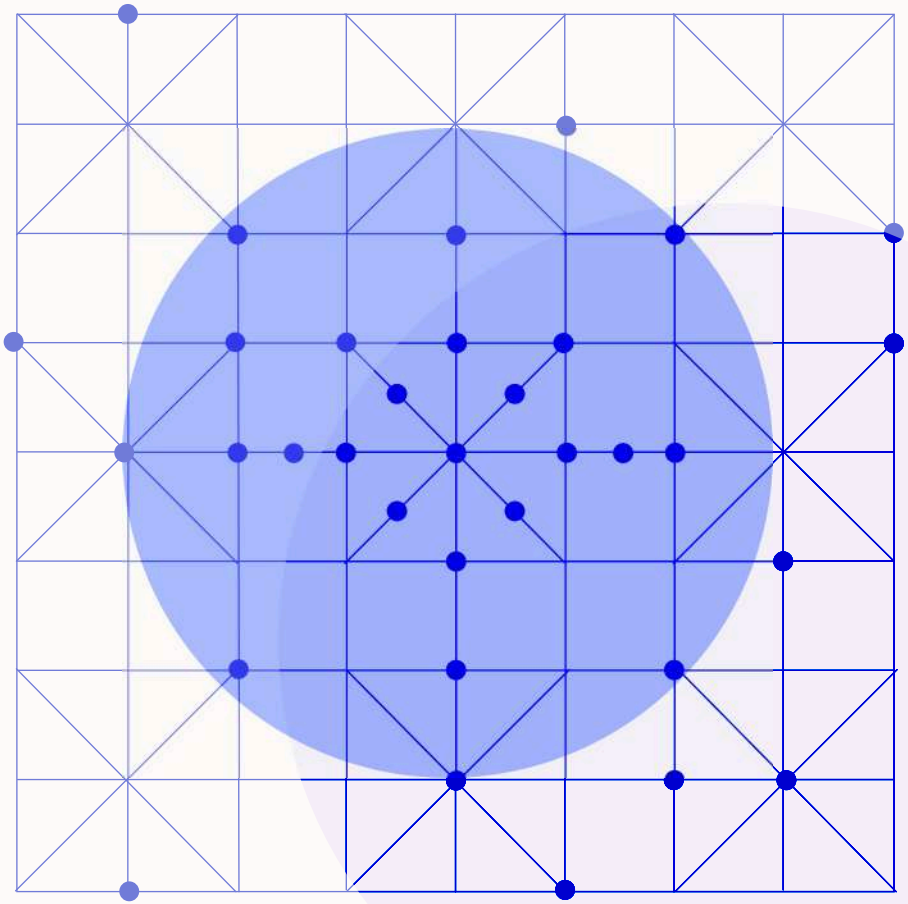
Flow Metrics were first introduced by Dr. Mik Kersten in his Flow Framework®. The Framework and Metrics are widely adopted in Value Stream Management practice across the world. Visibility of the metrics is now provided through Planview® Tasktop Viz and Planview® Tasktop Hub. For transparency, HYPR is a Planview Partner in Australia and New Zealand and we'd love to talk with you about how these products can transform your world. However, this Scenario Book is first and foremost designed to help you understand the concepts, framework and positive outcomes of measuring flow.

*DORA is the acronym for DevOps Research & Assessment – a long-running Google research programme created to understand the capabilities that drive software delivery and operations performance.

Your scenario?

- Your existing metrics provide visibility of progress of software initiatives, but not the system as a whole. You can't identify the systemic constraints affecting the value stream
- The metrics don't show the flow of customer value
- The metrics are used by technology teams, but aren't readily understood by the wider business. You fear this is severely hampering alignment between tech and business leaders
- You can't see where the bottlenecks and dependencies are so you're not confident about what, where, why or how improvements should be made
- Quality appears to be deteriorating and you're frustrated about the high amount of rework and unplanned work in the system. You don't have enough visibility into technical debt
- You're certain that workloads are too heavy and there's too much work in the system, but you can't accurately see how much. So you can't make informed decisions about where to best allocate resources for better business outcomes
- You can't see quickly enough the impact of experiments and innovation
- You're flying blind with any efforts to accelerate flow

"The business needs better visibility of the value we're flowing to customers from our software investments, and the speed at which that value is reaching customers. Only then can we understand if and why flow is poor and what we might do to accelerate it"



You're not alone. But a revolution is underway...

Before 2018, there was no universally agreed framework, definition or metrics for understanding and seeing the end-to-end flow of value delivered to customers by software. And certainly not in ways that were related to business outcomes The status quo in organisations until then was typically:

- The IT function was siloed from 'the business' and treated as a cost centre, not a profit centre
- IT focused on delivering software projects (not products)
- The focus was on cost, time and requirements and not business value outcomes
- There'd always be too much work in the system
- There was no business-wide visibility of delays, no common language to describe them

Many organisations are still (at least) partly stuck in this world. But things are changing rapidly...

The Flow Framework® and the emergence of Value Stream Management

Dr. Mik Kersten introduced his Flow Framework in 2018. It was the first framework that defined Flow Metrics and their relationship to business results in the context of product value streams.

Kersten's work was a major catalyst in the 'Project to Product' movement and the birth of Value Stream Management as a practice. He showed how organisations could organise around value, measure its flow, see the constraints and make the best changes to accelerate flow. All with business outcomes in mind *and expressed in a universal language that could be understood by any stakeholder.*

The most progressive enterprises are adopting VSM and using Flow Metrics for good reason...

Achieving optimal flow

Value Stream Management strives for optimal flow. That is:

- Delivering the highest customer value
- In the fastest possible time
- With the best business outcome
- With the least effort
- And the lowest waste

Here's what it looks like:

Tracking flow of value to business outcomes

- Your business is data-driven. You have Flow Metrics that measure value delivery in non-technical and consistent ways that every stakeholder can understand. This helps connect 'the business' and 'IT'
- Metrics are presented on dashboards accessible to every stakeholder. You can see your system as a whole, in one place. Flow can be tracked alongside outcomes from Finance, Ops, CX, OKRs and HR
- You can measure ideas from 'value to outcome' and allocate resources accordingly
- You can track the impact of events, experiments and resources in the value stream directly to business results, make corresponding course corrections and improve ROI

Accelerating time to market

- You can identify systemic constraints and see their impact
- You can identify which constraints to tackle first – that is, which improvements offer the fastest and highest path to value
- You can focus on getting the right work done and make informed trade-off decisions around capacity
- You can create a better balance between innovation and sustaining investments

Identifying bottlenecks and dependencies

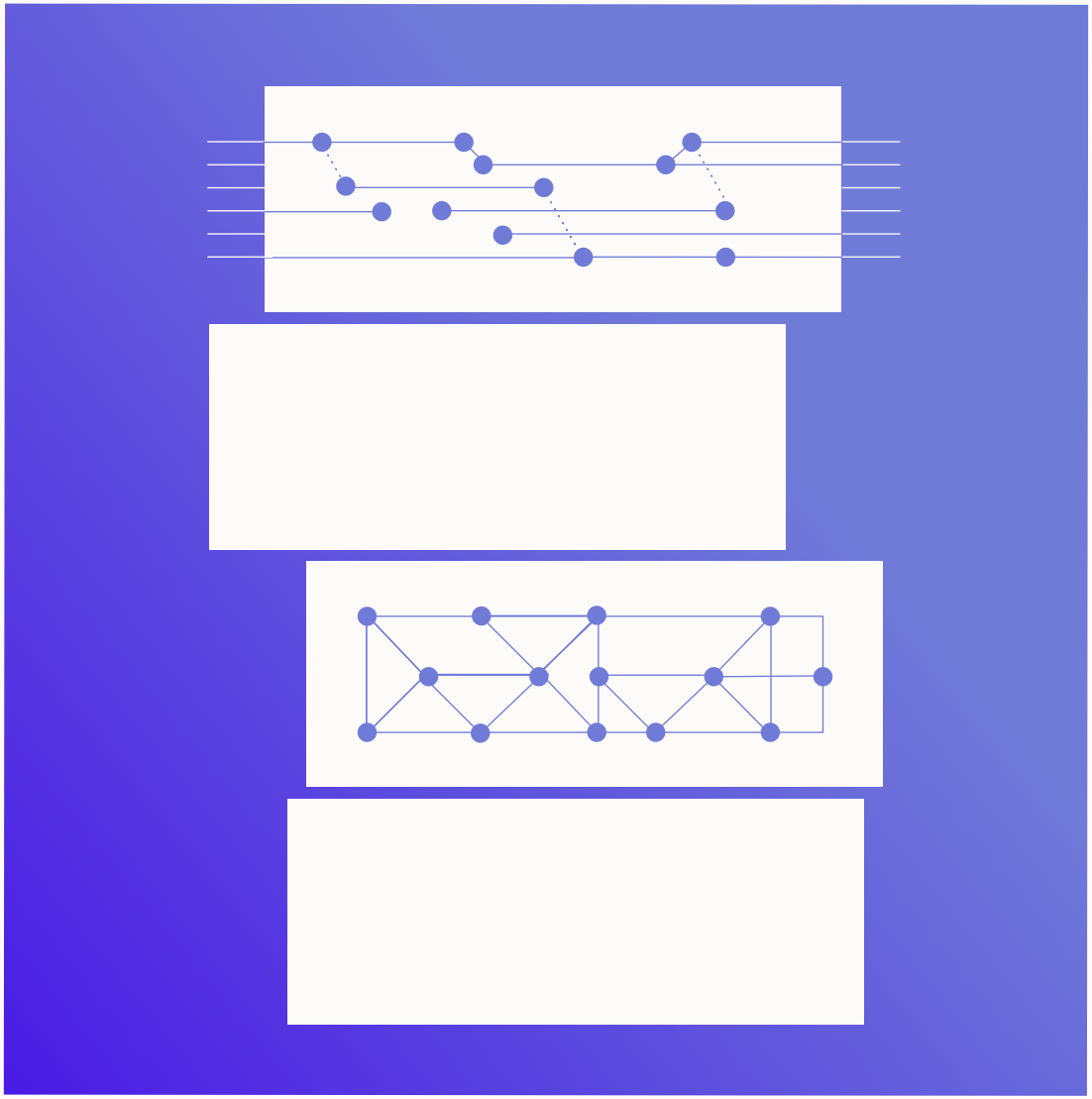
You're no longer optimising flow anywhere outside the systems (because that's sub-optimal and even counter-productive). Your Flow Metrics help you see across the system and identify where things are getting stuck. You can:

- **See where work is piling up** and focus effort on where it will make the biggest difference
- **See when quality is deteriorating** and get to the root cause by examining the underlying defects. This reduces rework and unplanned work
- **See where dependencies are slowing delivery** and mitigate them
- **See the results of experiments.** Flow Metrics reflect the effectiveness of improvement efforts so if it's working, you can double-down. If not, you can try something else

So how do you get there?

"The Flow Framework addresses the pivotal challenge to crack open the engineering and business black boxes, define a common language to bridge the gap between business and technology, and optimize the flow of business value to customers"

SOURCE: Flow Framework Community



The Flow Framework®

The Flow Framework® provides a blueprint for implementing Value Stream Management and transforming your organisation into a high-performing business. At its heart are Flow Metrics.

Flow Metrics®

Flow Metrics present a new approach to measuring software delivery value streams against business outcomes – that is, *what exactly is the value software generates for the organisation*? The metrics are centred around the principle that all software-related work – design, development and delivery – must create value for the business (and if not, then the business should consider not doing it).

In addition to measuring how value moves through the value stream, the metrics expose bottlenecks and weaknesses and facilitate decision-making processes.

The five metrics are:

Flow **Velocity®**	Is value delivery accelerating?
Flow **Efficiency®**	Is upstream work holding up delivery?
Flow **Time**	Is time-to-market getting shorter?
Flow **Load®**	Is demand vs capacity being balanced?
Flow **Distribution®**	Is there investment in both value generation and protection?

Flow Items

The Flow Metrics categorise four types of value-creating work called 'Flow Items':

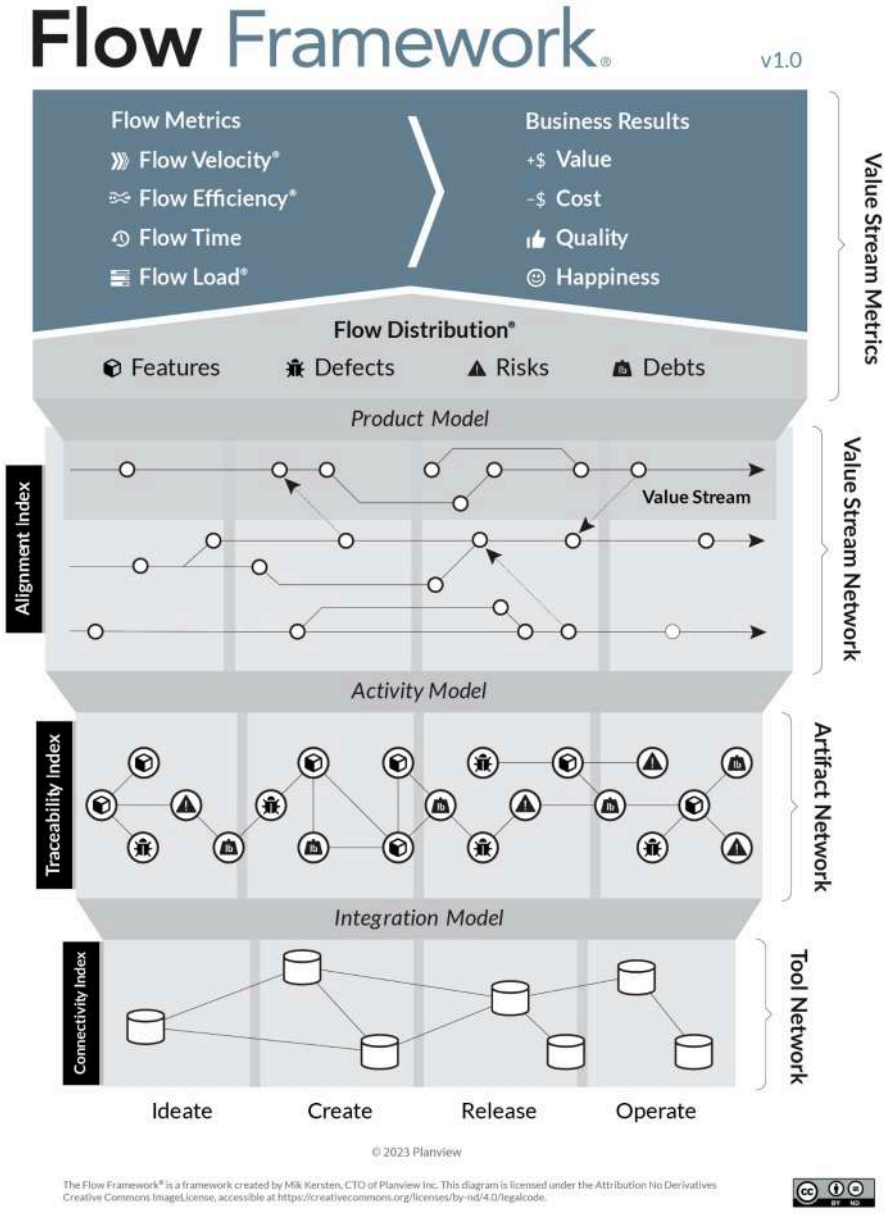
- **Features** – relating to business value
- **Defects** – representing quality
- **Risk** – relating to security and compliance
- **Debt** – representing obstacles to future delivery

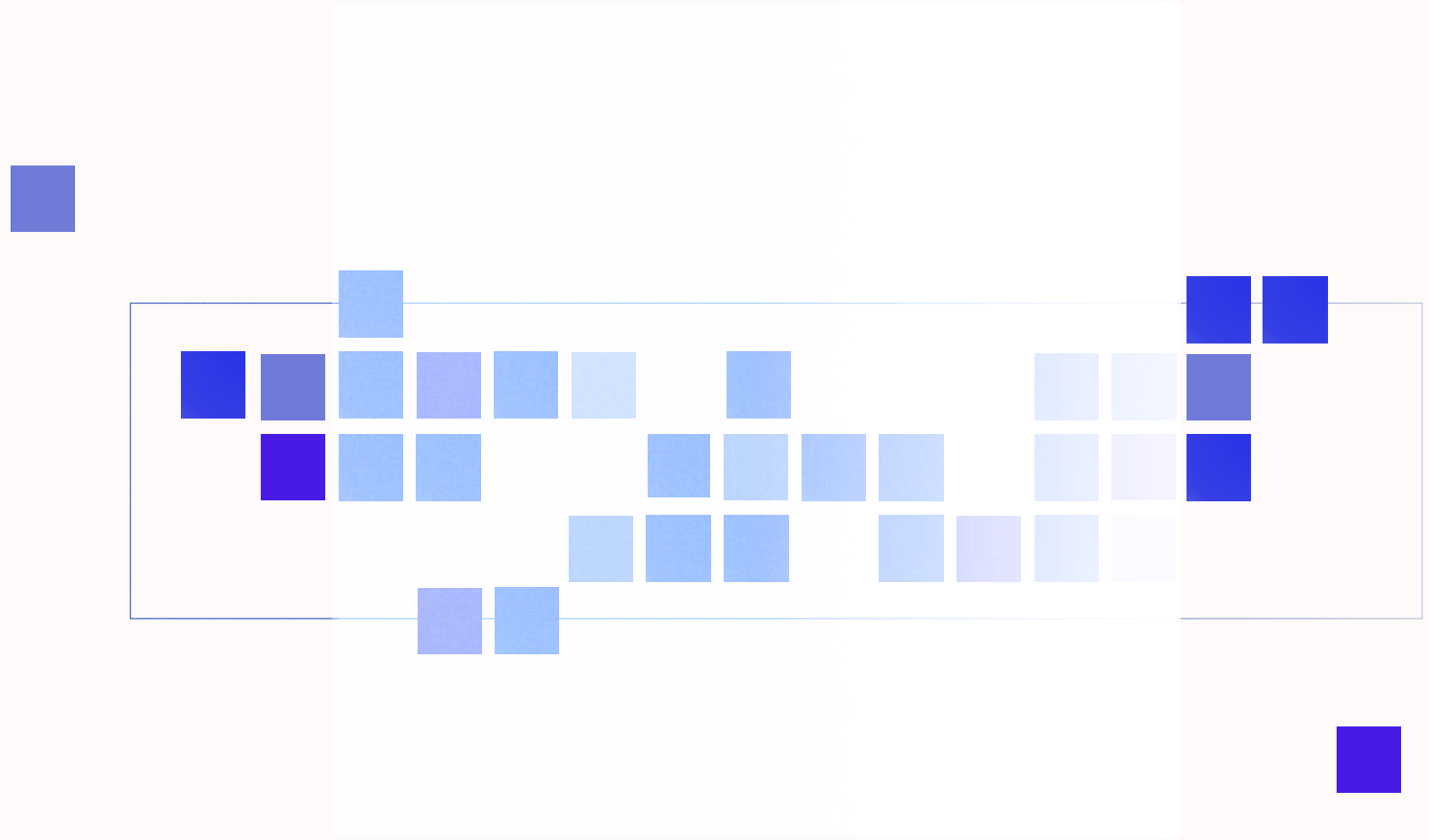
By capturing objective data about these types of work from across integrated software delivery toolchains, organisations can generate clear business-centric metrics to identify:

- How is software delivery impacting revenue, quality, and costs?
- What's slowing down value delivery?
- How are DevOps, Agile and SAFe® transformations performing?
- Where should strategic investments be made to improve business outcomes?

Improved decision making

Analysing the Flow Metrics provides answers to these questions. It focuses organisation-wide decision making on achieving better business outcomes, higher value to the business, lower cost of operation, improved product quality, greater team engagement.





Flow Metrics® in more detail

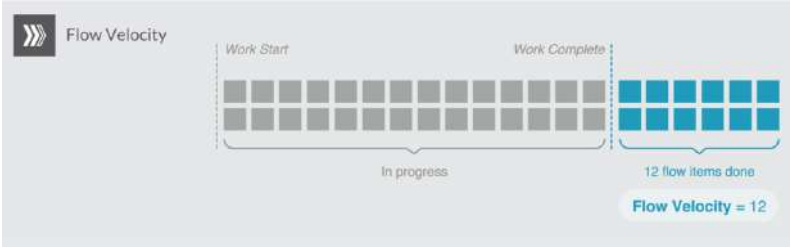
Flow Velocity® – How fast is business value being delivered?

Flow Velocity measures how many Flow Items are being completed – or the throughput – in a given period. Its productivity measure which, along with Flow Time, is known as a 'money metric'.

Teams see how many Flow Items are completed and how many are in progress. Over time, they can see if their delivery rates have improved and can provide more accurate forecasts on how much work (and value) they can deliver.

This metric does not rely on estimating the size, scope of work or the priority of each Flow Item (which should be predefined). It focuses solely on the end-to-end movement of the Flow Items.

This helps a business make critical decisions about what to deliver to customers. Does it focus on major updates that may take a long time to complete (low Flow Velocity) and which might, for example, hurt renewal rates? Or does it focus on minor updates released faster and incrementally (high Flow Velocity) which might drive higher renewal rates?

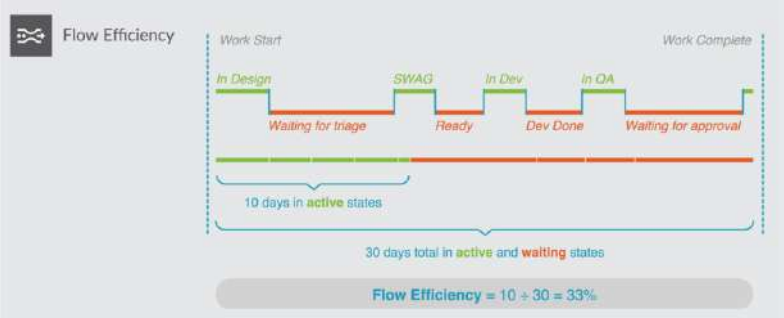


Flow Efficiency® – What value-adding work are teams undertaking?

Flow Efficiency helps determine the proportion of Flow Items actively being worked on. It identifies where waste and wait states are holding up value delivery (or Flow Time). If Flow Efficiency is low, waste exists in the software delivery process – items are stagnating in a wait state for some reason.

This stagnation causes a domino effect. The more items in a wait state, the more work in progress (WIP) or Flow Load, and the more bottlenecks in the value stream. As bottlenecks grow, waste increases, adding further delay. With the Flow Efficiency metric, you can readily see excessive wait times and work to reduce or eliminate bottlenecks.

This metric is based on Flow Time (the time it takes for work to be completed from the moment it enters the value stream), as opposed to cycle time (which is often used in DevOps and measures the time it takes to complete a single step). Therefore, it captures the upstream and downstream wait time, monitoring the whole value stream and process from end to end.



Flow Time – How fast are you delivering business value?

Flow Time – the other 'money metric' – tells you what your 'time to value' is, providing a measure of speed and predictability and enabling more accurate time-to-market forecasts

Flow Time is totally customer-centric in that it measures the elapsed time any type of work takes to complete *from the moment it enters the value stream to the moment it reaches the hands of the customer*. This appeals to business and product owners as it tells them how long a request takes to complete. It can also help determine if investments in delivery are accelerating Flow Time over time.

Flow Load® – Is demand outweighing capacity?

Flow Load is a leading indicator that measures the number of Flow Items being actively worked on in a value stream, essentially quantifying WIP. If the total number of items being worked on (in either an active or waiting state) is too big, there will be a negative effect on output.

This metric plays an important role in the engagement of the people who plan, build and deliver software. It directly correlates to productivity and quality of work and helps ensure teams are not being overburdened by the shift to digital business. In this regard, Flow Load can be a key metric in predicting and improving overall employee morale.

Monitoring Flow Load shows changes in Flow Velocity and Flow Time, allowing the business to see the point at which taking on too many Flow Items simultaneously reduces output. This visibility allows teams to set a load level that maximises Flow Velocity and minimises Flow Time, such as increasing the workload for more experienced teams working on a mature product value stream and reducing it for a smaller team working on a new product.

Flow Distribution® – Do we have a healthy and dynamic mix of work?

To maintain Flow Velocity and accelerate the delivery of business value, all product value streams should be working on a mix of Flow Items that reflects the maturity of their product and lines up with their organisation's desired outcomes. A reminder – the Flow Items are:

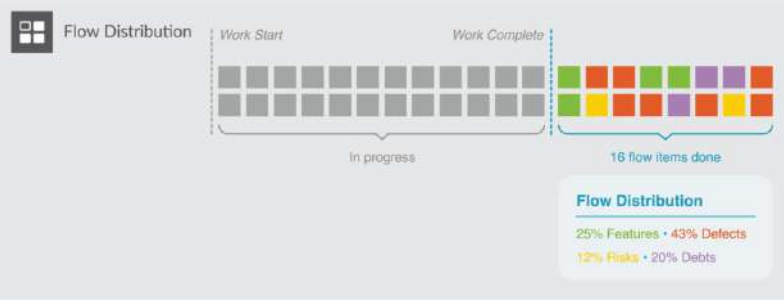
- **Features** (relating to business value)
- **Defects** (representing quality)
- **Risk** (relating to security and compliance)
- **Debt** (representing obstacles to future delivery)

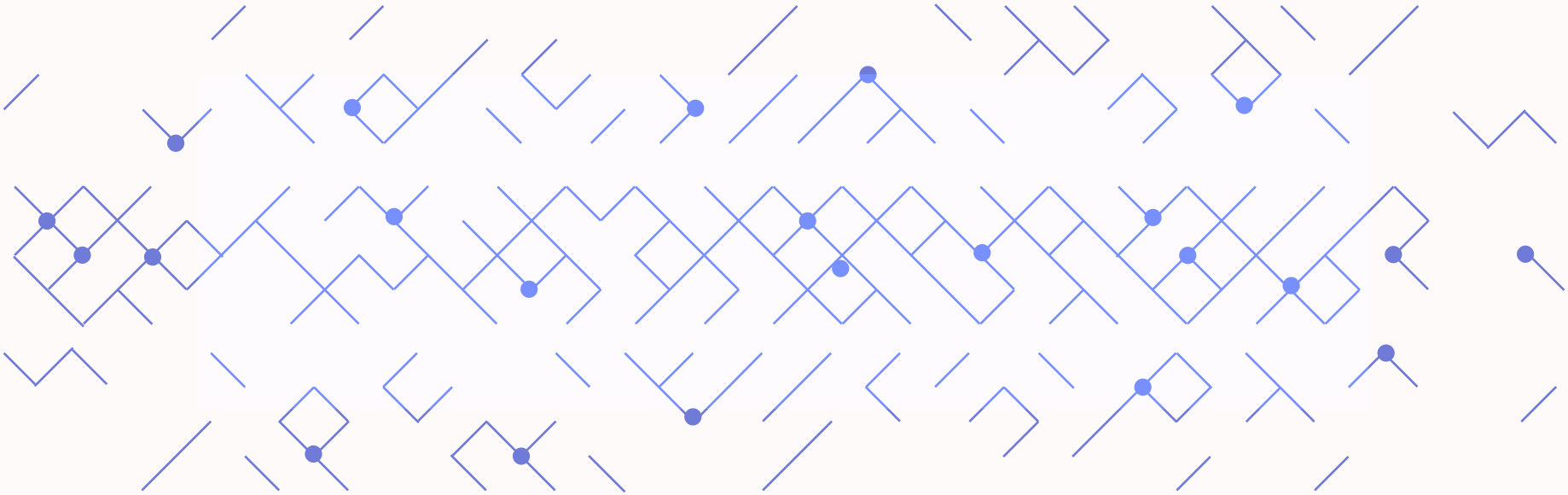
Flow Distribution measures the quantity of each type of Flow Item in a value stream to ensure investment is balanced between innovation and sustaining value in existing products. The ideal distribution is unique to each organisation and varies across new ideas through to end-of-life systems.

By tracking the proportion of Flow Items within the value stream, businesses have the data-driven analysis they need for important discussions around trade-offs. For example, high Flow Velocity may be required to get a new product to market quickly. This type of focus may make perfect sense when speed to market is the desired strategic outcome (eg. beating a competitor to market).

Focusing on speed however, usually comes at the expense of working on other items, like bugs (or Defects) and technical debt. If left unaddressed, this imbalance could undermine the stability of a product moving forward.

Flow Distribution makes all types of work visible and ensures teams can understand the impact of their decisions to prioritise one type of Flow Item over another.





Your journey to optimal flow

By adopting Value Stream Management and engaging the Flow Framework®, you can start the journey towards optimal flow. But how do you make the move? And how complex is it?

Organising around value streams and shifting from ‘project to product’ implies significant change. In our experience (and those of many businesses across the world), the reality is less daunting. More to the point, with the vast majority of US Fortune 500 companies already practising VSM, *there’s an urgency to adopt or be left behind.*

HYPR – a leading VSM and Flow practice

We were among the first consulting practices in Australia and New Zealand to invest in building a comprehensive Value Stream Management practice. Our highly-qualified practitioners and dedicated flow advisors have helped enterprises make the shift successfully. We can help you too...

Planview named a leader by Forrester

Planview has been named a Leader in The Forrester Wave™ Value Stream Management Report (Q4 2022). Using a 25-criteria evaluation, The Forrester Wave report ranks the 14 most significant value stream management solution providers on their current offering, strategy and market presence.

“Planview shines with impactful analytics and data modeling. Reference customers report high degrees of success using Planview Tasktop to analyze and uncover wasteful practices, resulting in higher throughput and value delivered”

(The Forrester Wave™: Value Stream Management, Forrester Research, Inc., Q4 2022)

A typical engagement – three steps

Learn to see

- We work with you to build a high-level roadmap for implementing the Flow Framework® metrics
- The roadmap includes work on a simple Proof of Concept (PoC) using your existing toolset (for example Jira or ADO). In some cases, we may recommend early implementation of a Value Stream Management tool such as Planview® Tasktop Viz
- The PoC helps understand the current state of your data and what metrics we can derive
- The PoC then leads us to ask key questions such as:
    - Does this Flow Load/Time/Velocity/Efficiency/Distribution look right?
    - Where are the anomalies?
    - What can we do to correct them?
    - What is the data telling us?

Learn to improve

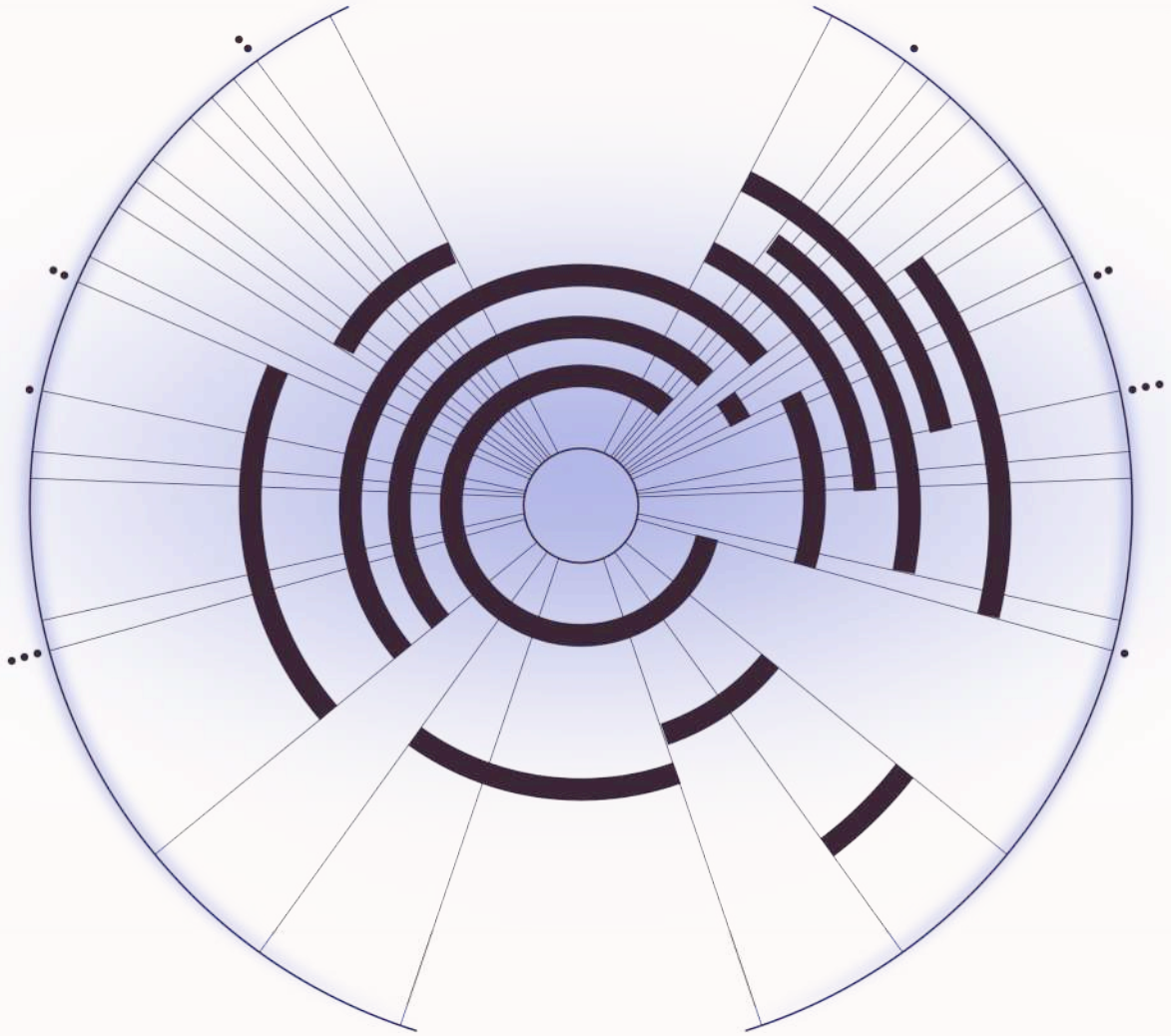
- After a few iterations of understanding the data, the Flow Metrics will begin to show systemic issues such as:
    - Why is the deployment phase taking up 70% of Flow Time?
    - Is our Flow Efficiency really 100%?
- When we have answers to key questions we can identify improvement experiments that make a positive impact on the Flow Metrics

Learn to scale

- Once Flow Metrics are embedded into the product value stream, we then move to the next product value stream.

Talk to us now

We'd love to help you bridge the gap between business strategy and technology delivery, move away from managing IT as a siloed set of projects and see the business impact of your IT investments.



Why HYPR?

We can help you keep on the right side of technology change and make the decisions that ensure your system accelerates the flow of customer value. Call us now...

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

Do you have the metrics you need to understand how work is flowing in your system and act on the insights? We'd love to introduce you to the Flow Framework. Call us now...

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Thanks to all the clients and 'Friends of HYPR' who provided feedback and the pioneers of ideas and models that help us see things in new and different ways.

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