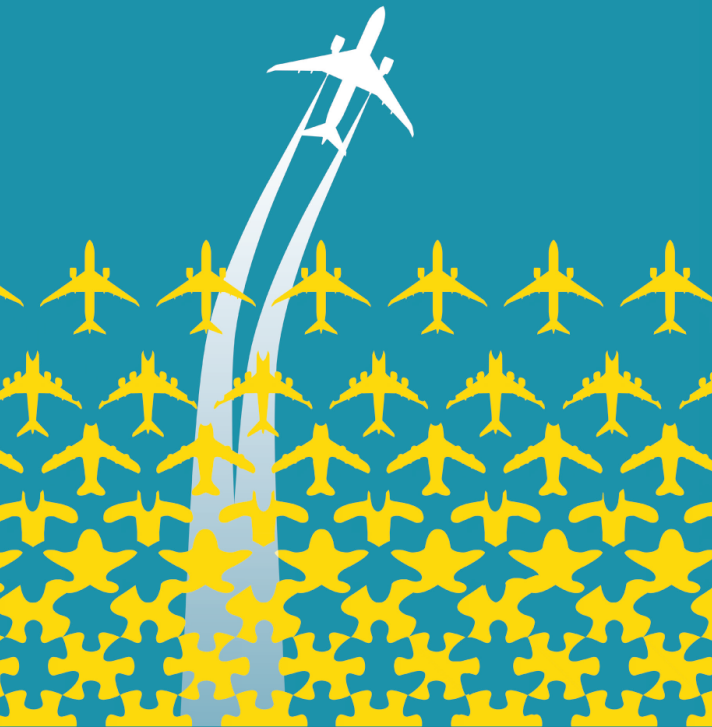


PROJECT TO PRODUCT

HOW TO
SURVIVE AND
THRIVE IN THE
AGE OF DIGITAL
DISRUPTION
WITH THE FLOW
FRAMEWORK

MIK KERSTEN



The CIO Who Mistook a Value Stream for a Hat and Other Flow Diagnostics

Dr @mik_kersten (Tasktop Founder & CEO)

SPECIAL THANKS TO



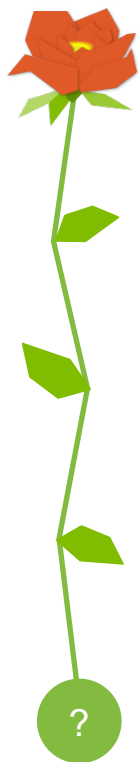
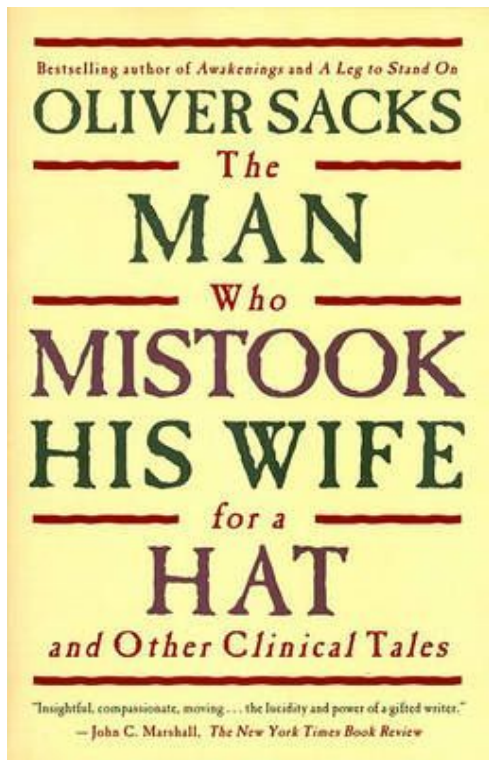
Carmen
DeArdo



Dominica
DeGrandis



Naomi
Lurie



"A convoluted red form with a linear green attachment." -- Dr P

Sacks discovered Dr P could not recognize objects by sight alone (visual agnosia, occipital lobe damage).

Encouraged Dr P to use his other senses. He instantly realized that he was holding a rose.

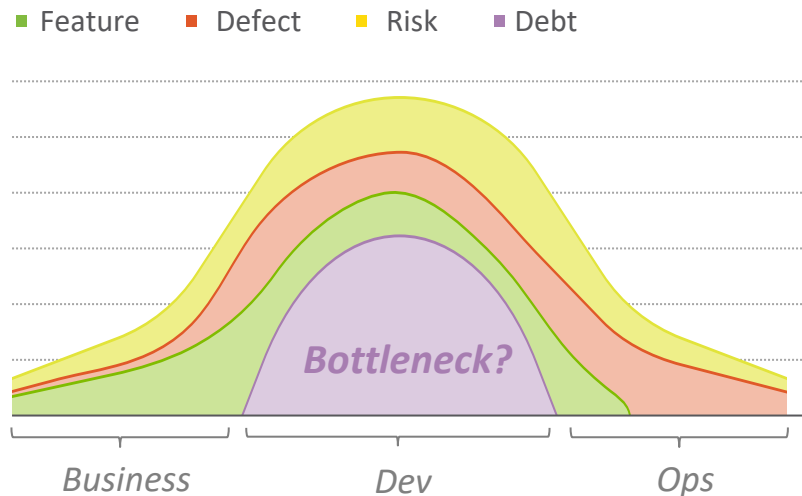
Many execs who have never coded exhibit a similar inability to see tech debt for what it is. But want to.

Are there 'other senses' we can use to make tech debt visible to those who cannot see it directly?

The CIO Who Mistook a Value Stream for a Hat

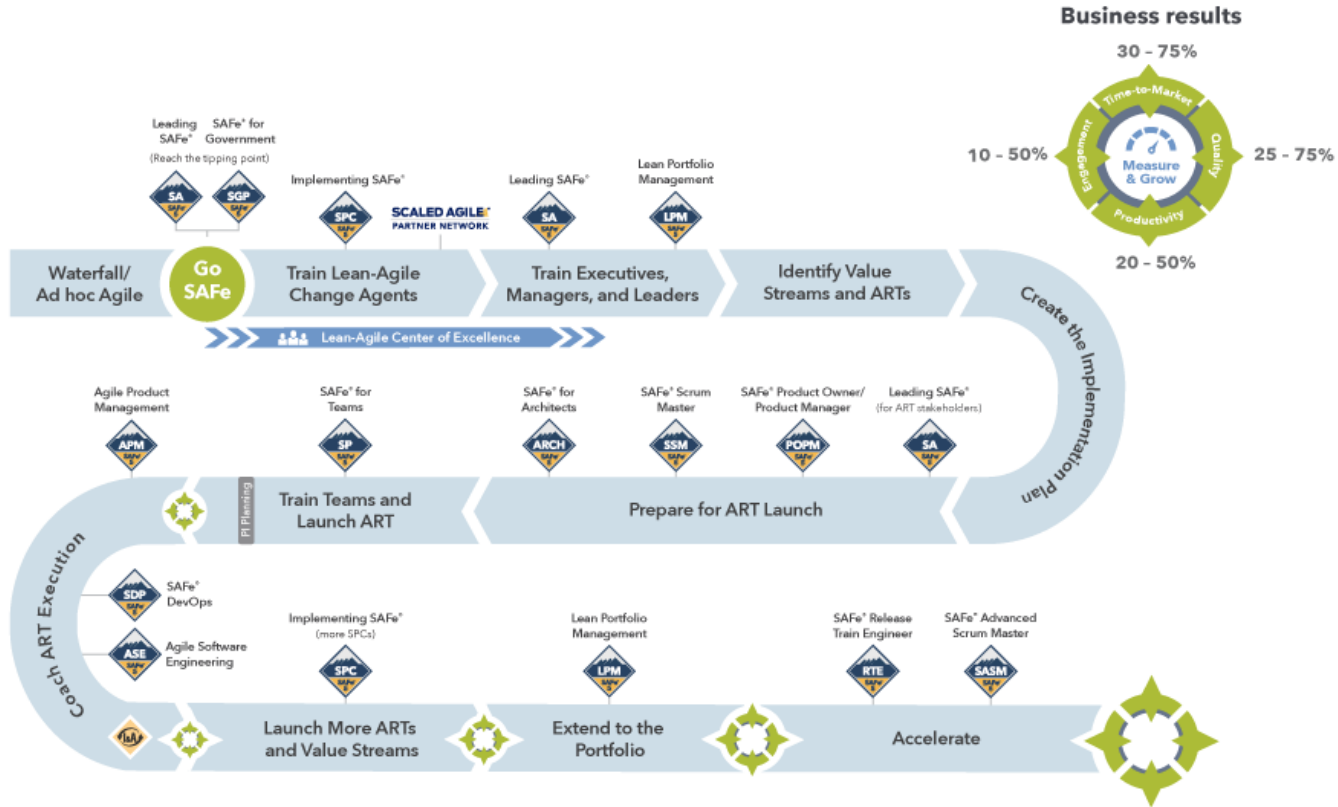
- Highly capable tech executive, pushing for massive investment in tech debt work
- Pressure on dev teams, feature capacity becomes dramatically reduced
- Measuring end-to-end time to value showed problems from scope changes and ops outsourcing model

⚠ *Software is not static.* To see the dynamics we need to visualize flow and connect it to business results.



Measuring flow opens the door to clinical diagnoses of digital transformations

How Are You Measuring the Journey?



7 things to STOP doing in SAFe

Treating SAFe as a prescriptive methodology

Implementing SAFe in name only

Relying on opinion over data

Focusing on SAFe vanity metrics

Overloading organizational capacity

Prioritizing Agile ceremony over technical excellence

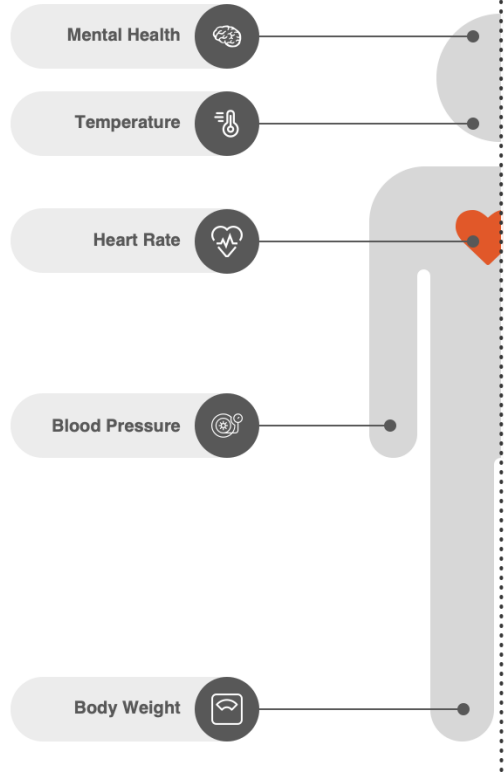
Accepting dependencies as immutable



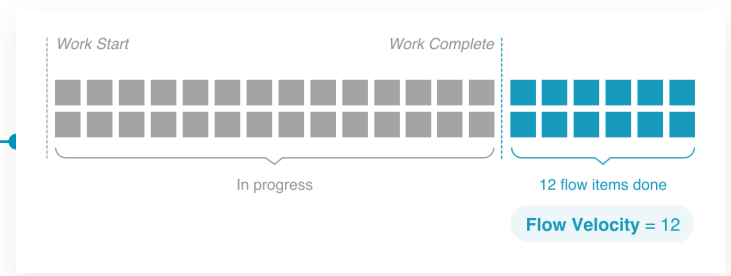
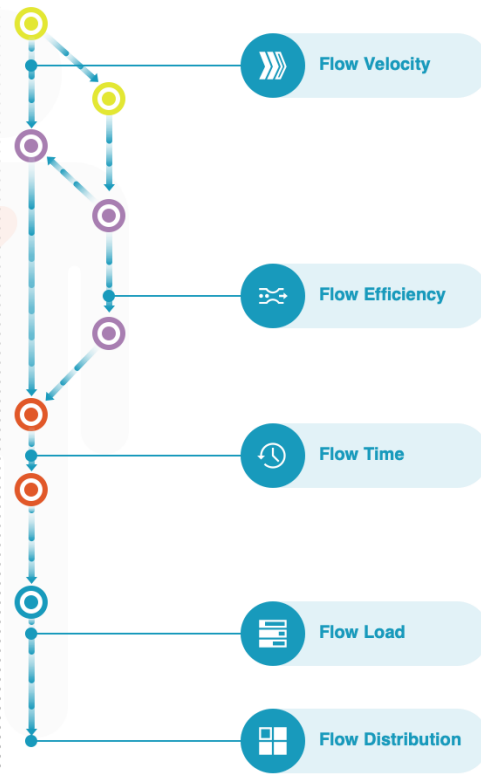
Dr. Steve Mayner

SAFe Fellow @ Scaled Agile, Inc.

HUMAN BODY • VITAL SIGNS

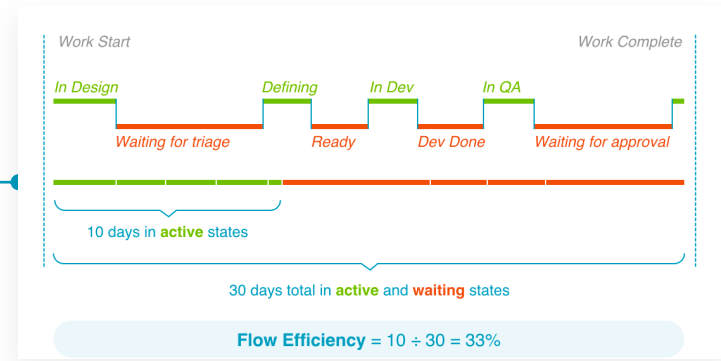
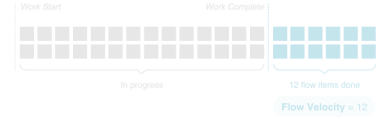
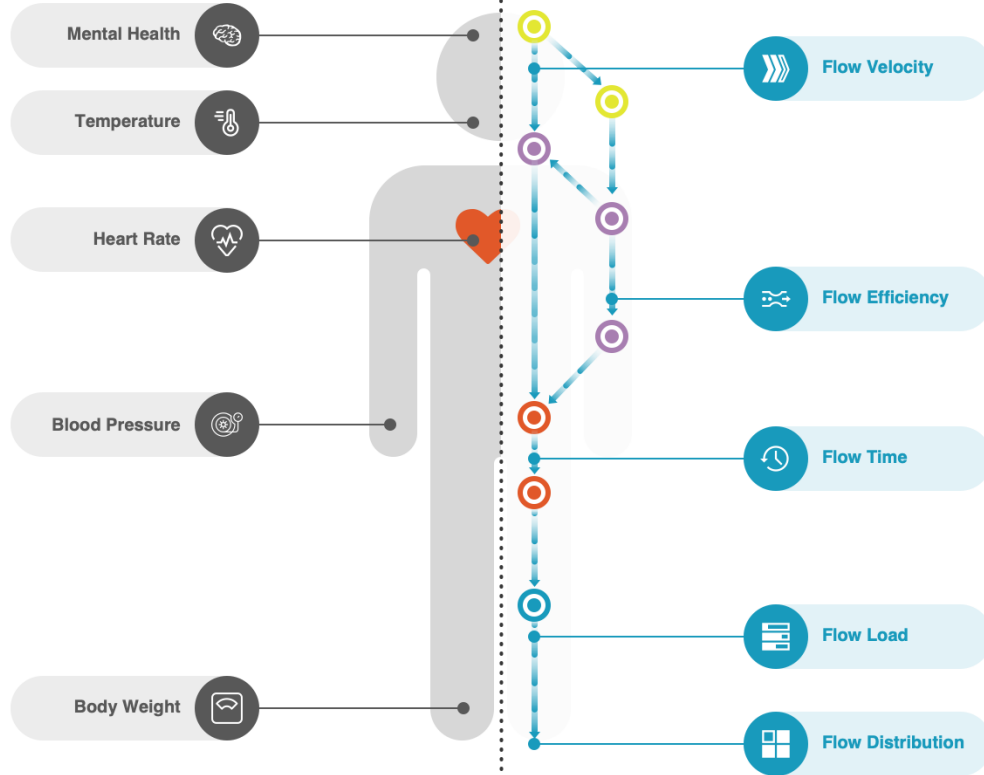


VALUE STREAM • FLOW METRICS



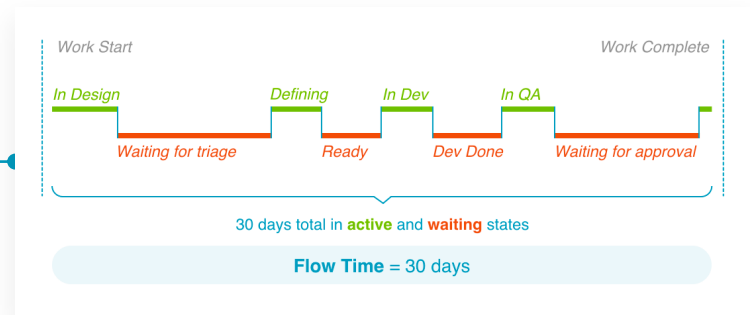
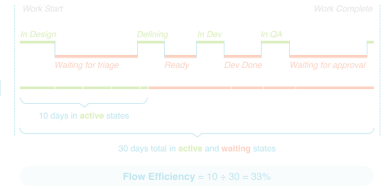
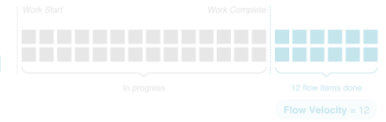
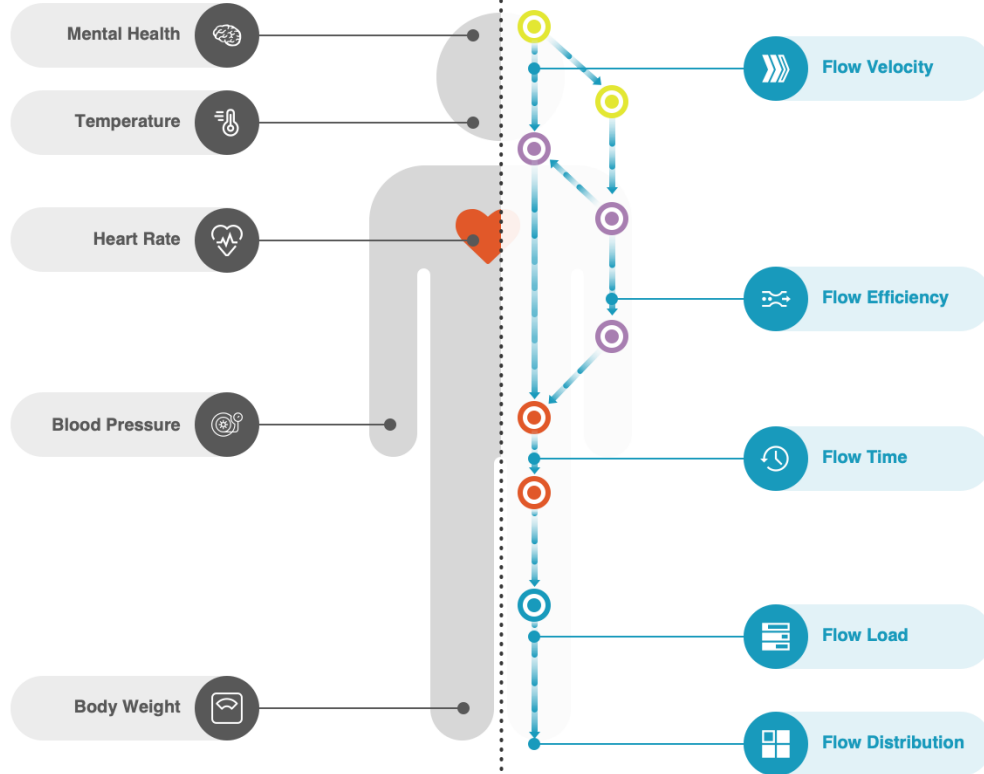
HUMAN BODY • VITAL SIGNS

VALUE STREAM • FLOW METRICS



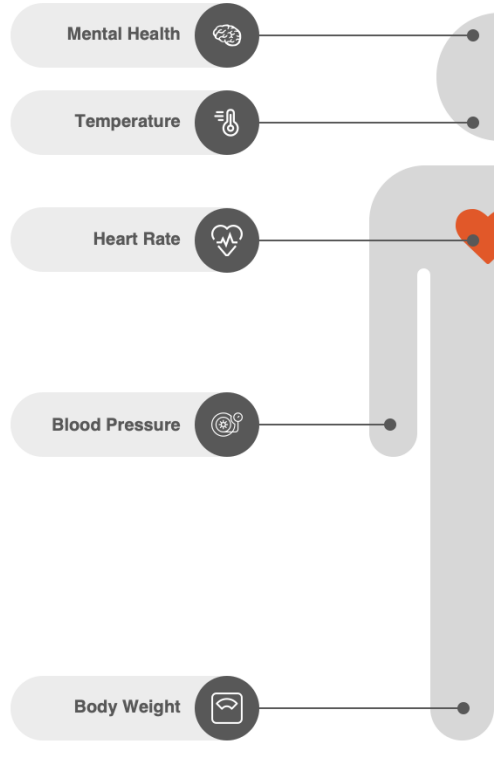
HUMAN BODY • VITAL SIGNS

VALUE STREAM • FLOW METRICS



HUMAN BODY • VITAL SIGNS

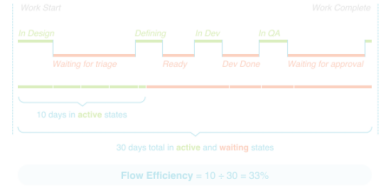
VALUE STREAM • FLOW METRICS



Flow Velocity



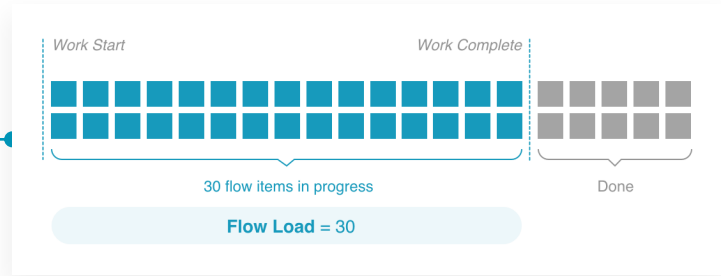
Flow Efficiency



Flow Time



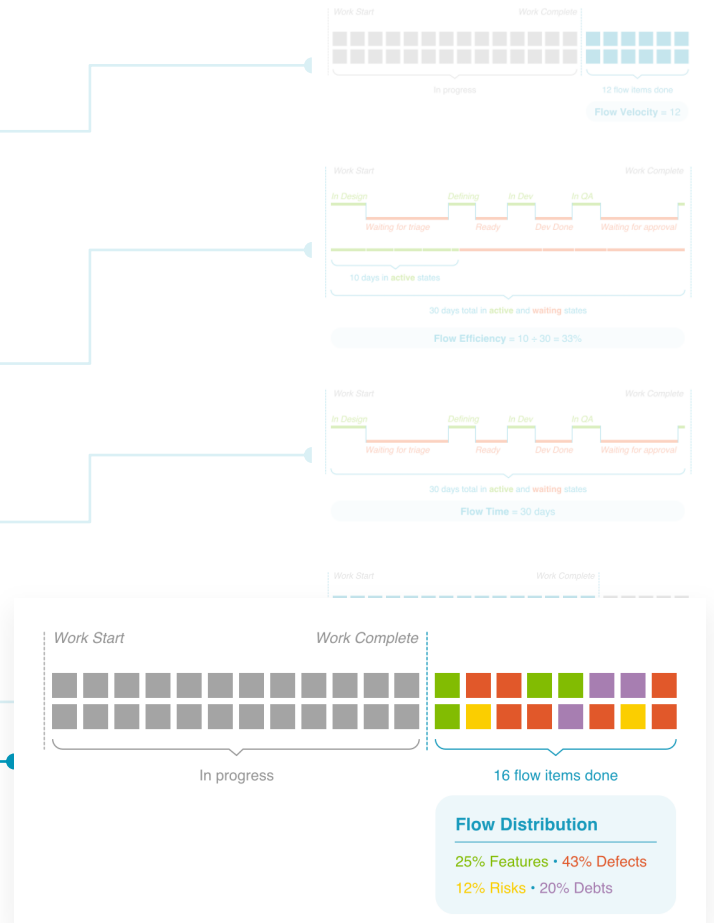
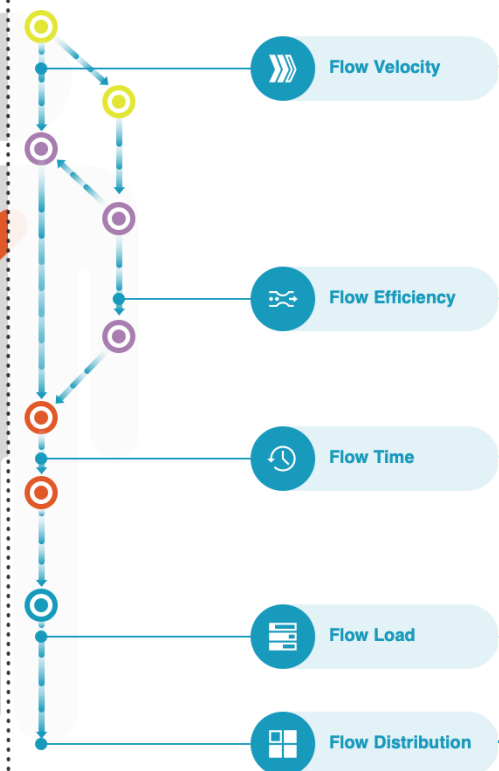
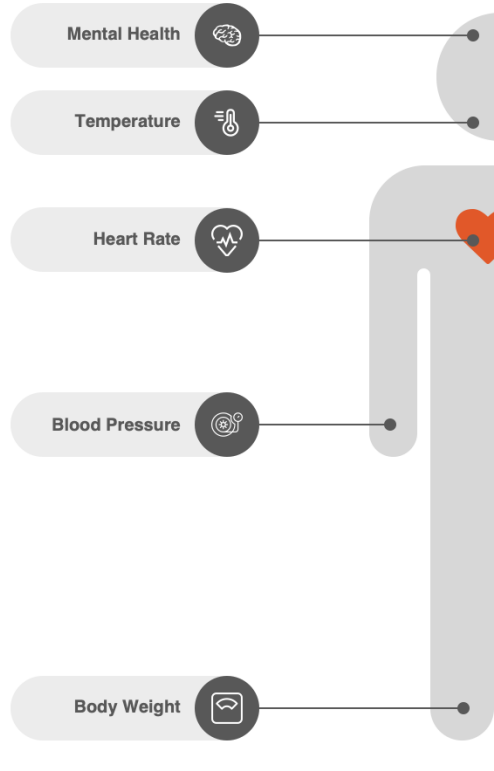
Flow Load



Flow Distribution

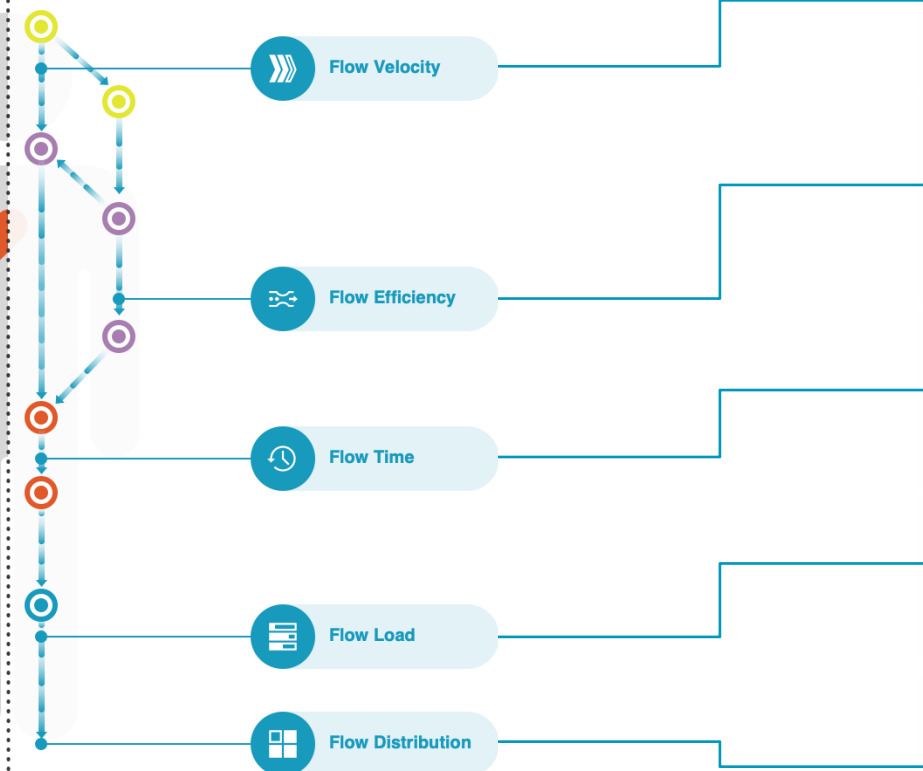
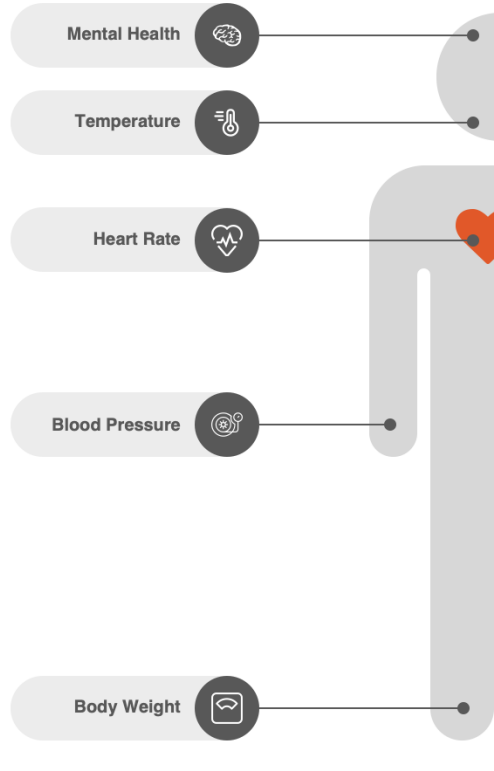
HUMAN BODY • VITAL SIGNS

VALUE STREAM • FLOW METRICS



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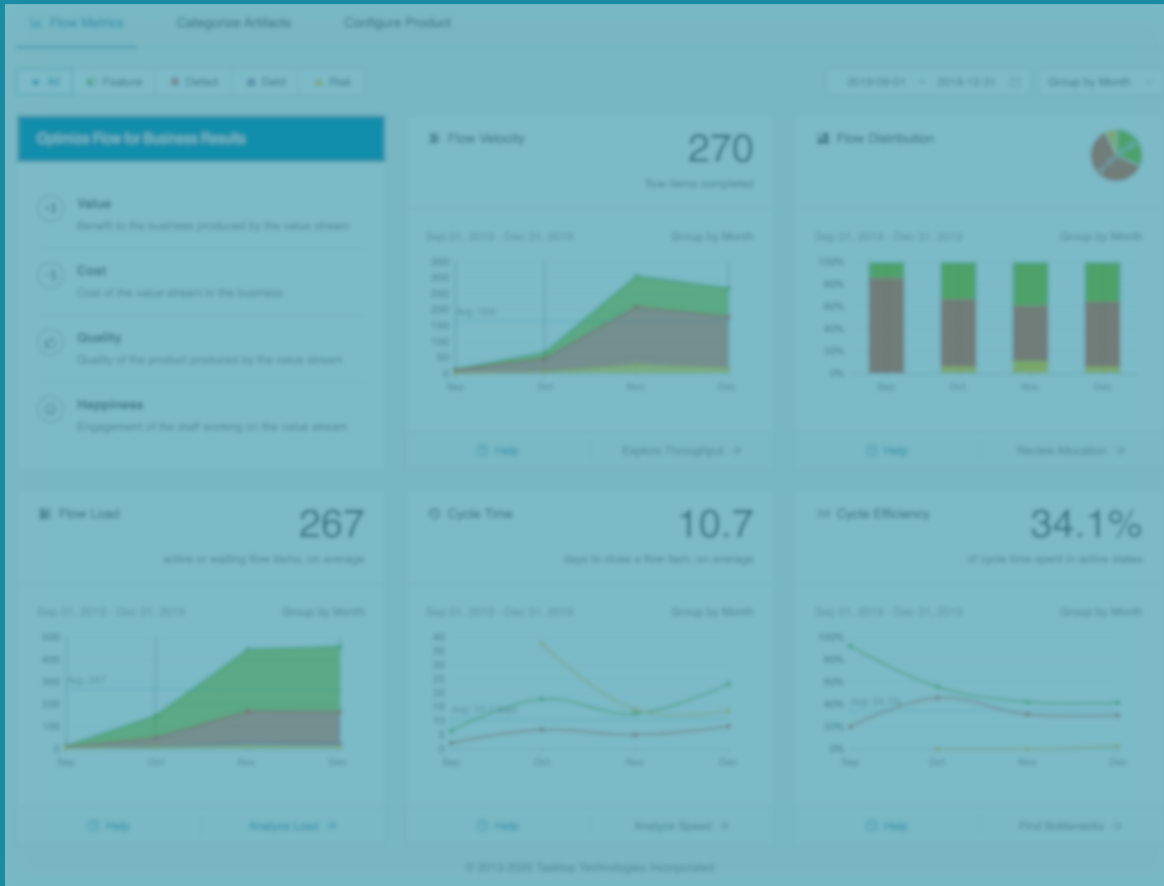
VALUE STREAM • FLOW METRICS



FLOW DIAGNOSTIC

Tech Debt Death Spiral





PATIENT

- Financial services company



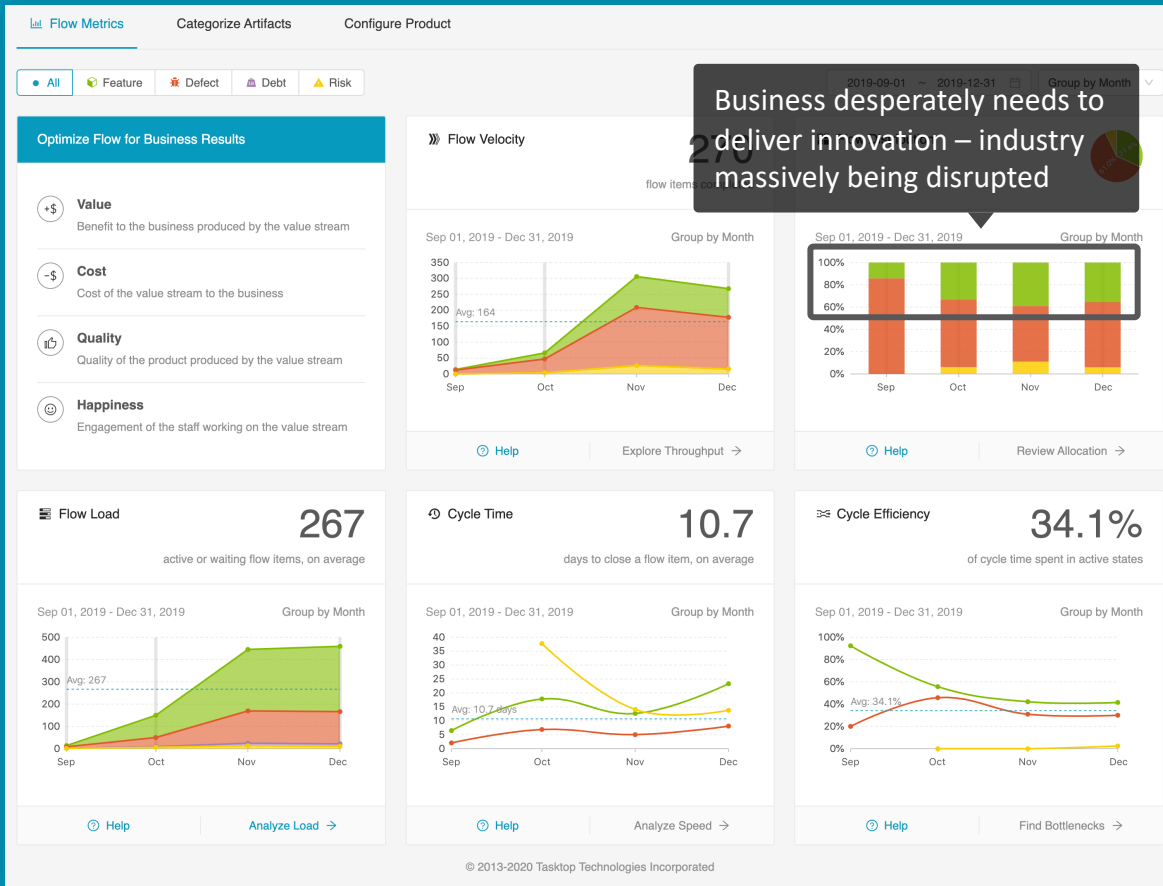
HISTORY

- Agile rollout successful
- Mature CI/CD pipeline



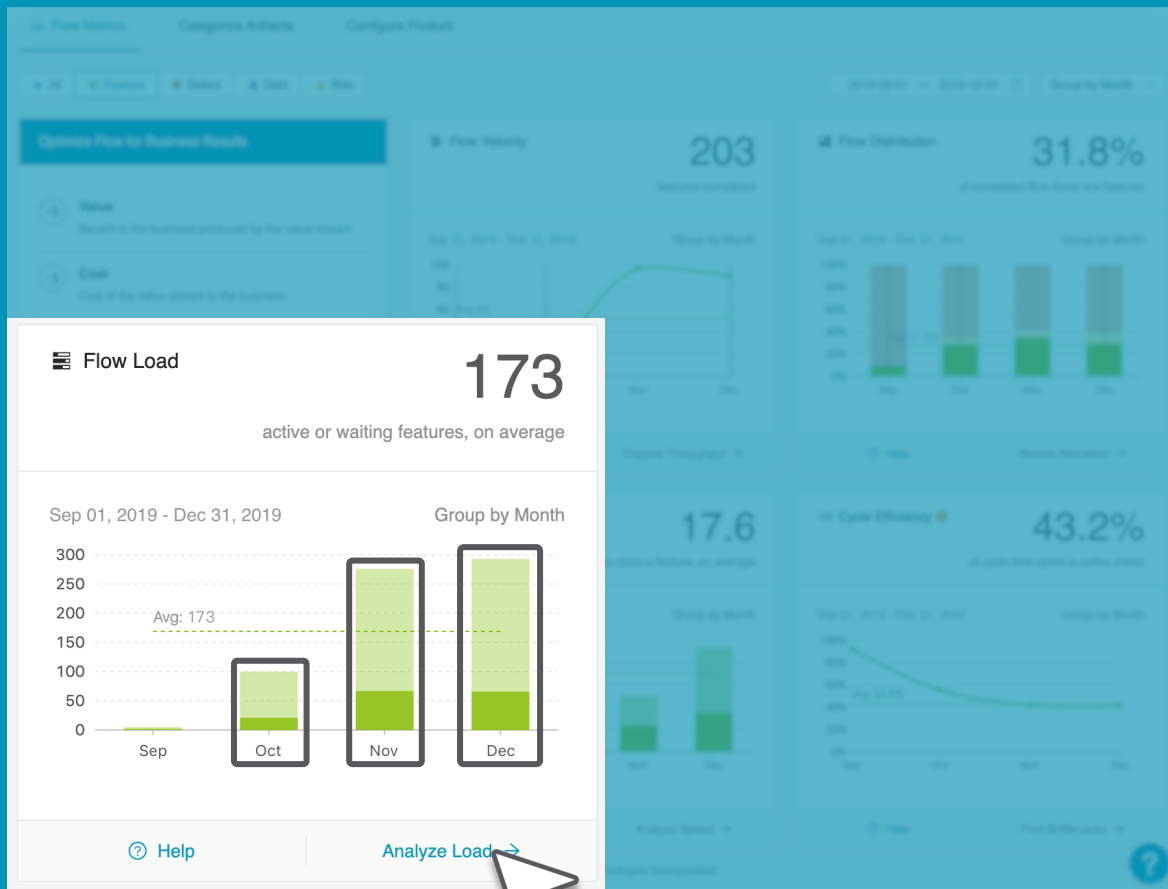
AILMENTS

- Feature delivery is painfully slow
- Business concerned about lack of innovation

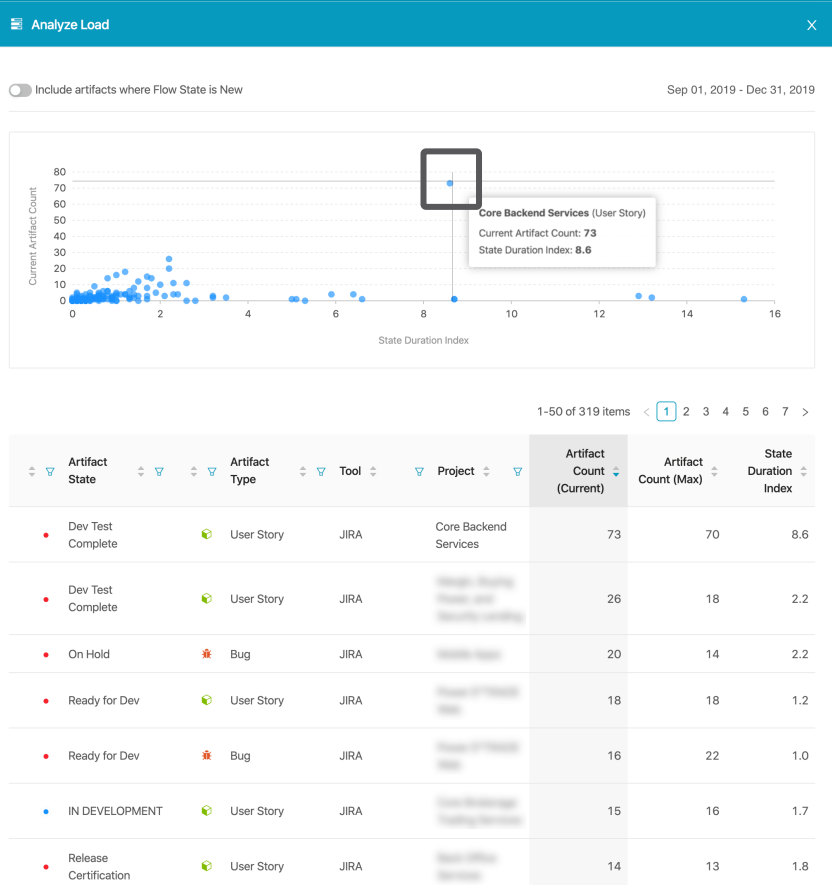


Business desperately needs to deliver innovation – industry massively being disrupted

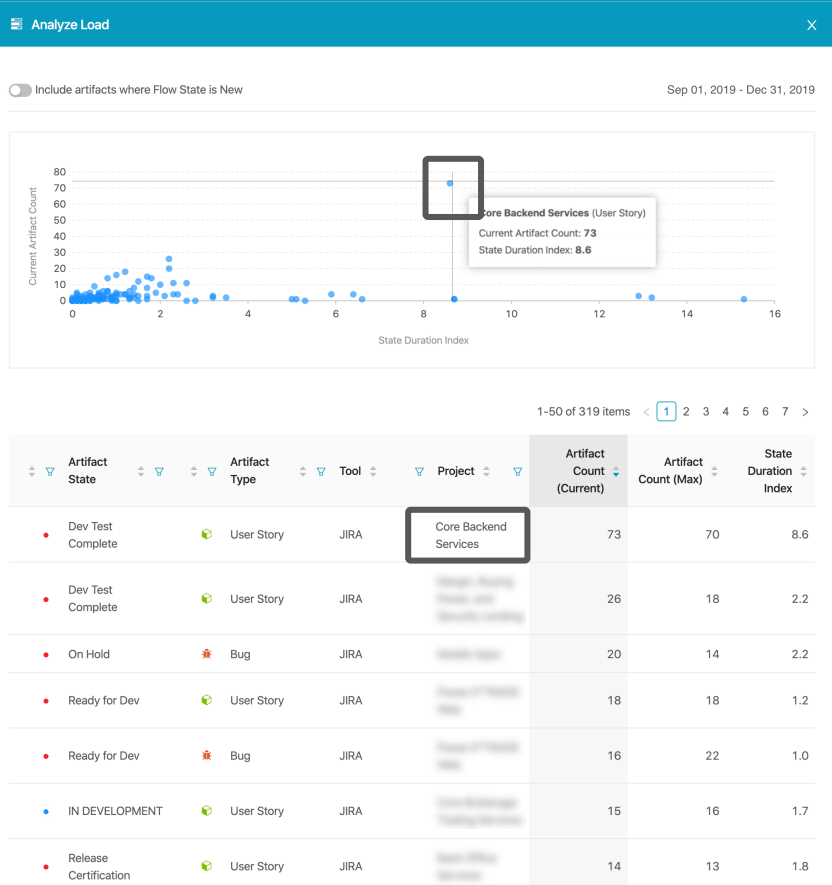
1. Feature delivery is painfully low with no investment in debt visible



1. Feature delivery is painfully low with no investment in debt
2. **Flow Load chart indicates features are just sitting and waiting for very long periods of time**



1. Feature delivery is painfully low
2. Flow Load chart indicates features are just sitting and waiting for very long periods of time
3. Bottleneck in Core Backend Services, a painful legacy constraint, that goes against locality



1. Feature delivery is painfully low

2. Worse – when you look into the Flow Load, features are just sitting and waiting for very long periods of time

3. Bottleneck is in Core Backend Services, a painful legacy constraint that goes against locality

4. Forcing the conversation that if they don't "slay the monolith" they will never be able to compete

Tech Debt Death Spiral



*Accepting dependencies
as immutable*

FINDINGS

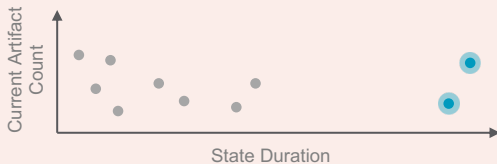


Delivery is going from a crawl to standstill

FLOW SYMPTOMS



- ⬆️ Feature *Flow Time* is increasing
- ⬇️ Feature *Flow Velocity* is decreasing
- ⤵️ *Flow Distribution* of debt is invisible
- ⬆️ *Flow Distribution* of defects is increasing



BUSINESS SYMPTOMS



- Time-to-market unacceptably low
- Cost of delay is growing
- Team happiness is decreasing
- New hire onboarding is slowing

MISTREATMENTS



- Unsustainable work, heroics
- Adding dev headcount to biz apps
- Lowest cost going to backend

TREATMENT PLAN



- Make all tech debt work visible
- Measure via Feature *Flow Time*
- Put top talent on the backend

CHECKUP



- Feature *Flow Time* improvement
- Lower defects in *Flow Distribution*
- Happiness increases across teams

"Your bottlenecks stare at you in the face ...and wave at you (to add insult to injury) once you start looking at your flow metrics."

FLOW DIAGNOSTIC
Neglected WIP





PATIENT

- Healthcare company



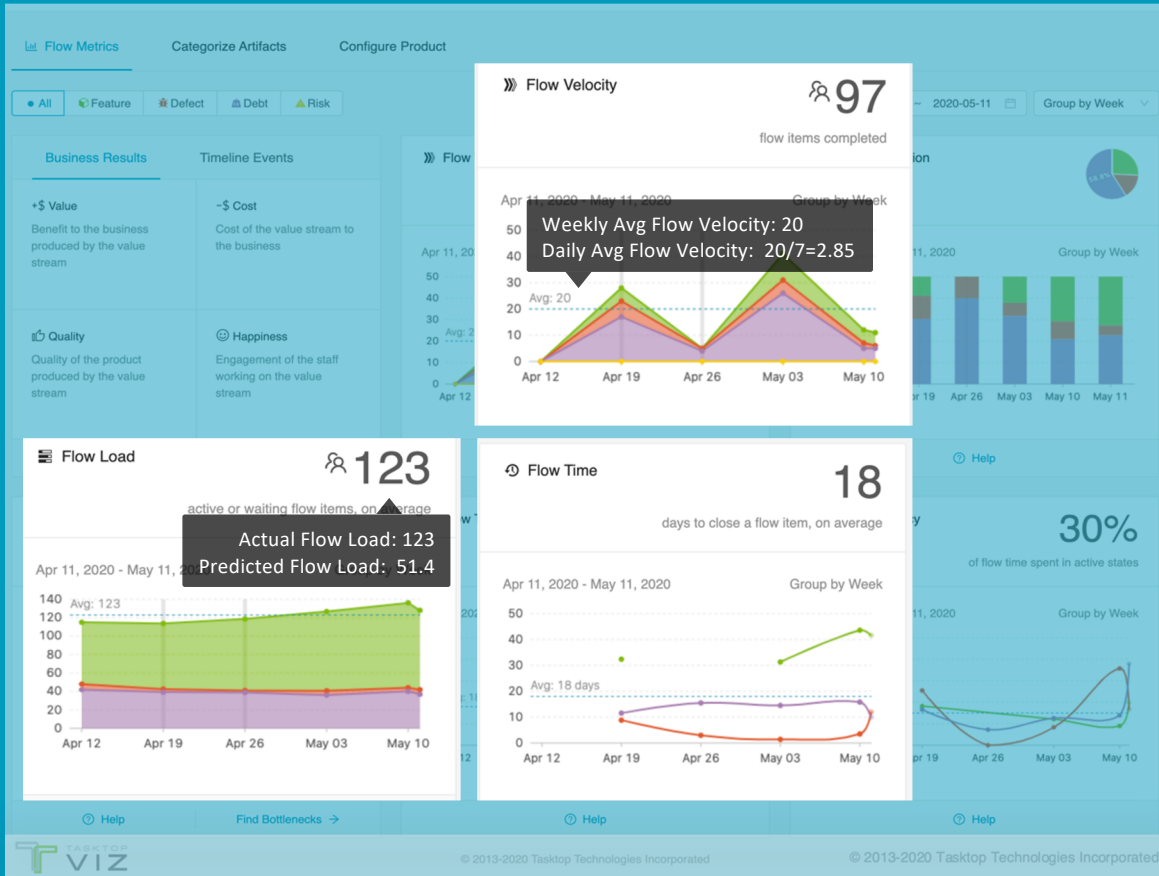
HISTORY

- Rolling out SAFe®
- *Championing tech debt*

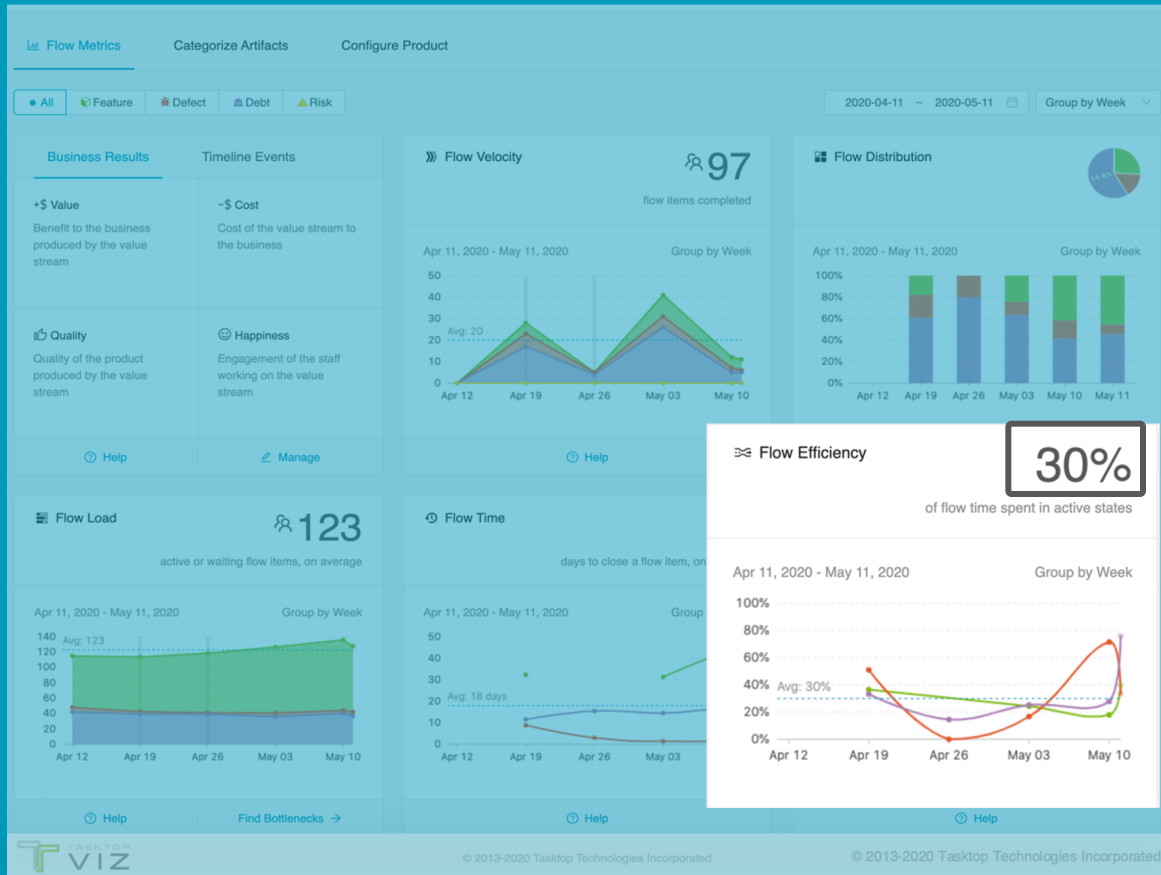


AILMENTS

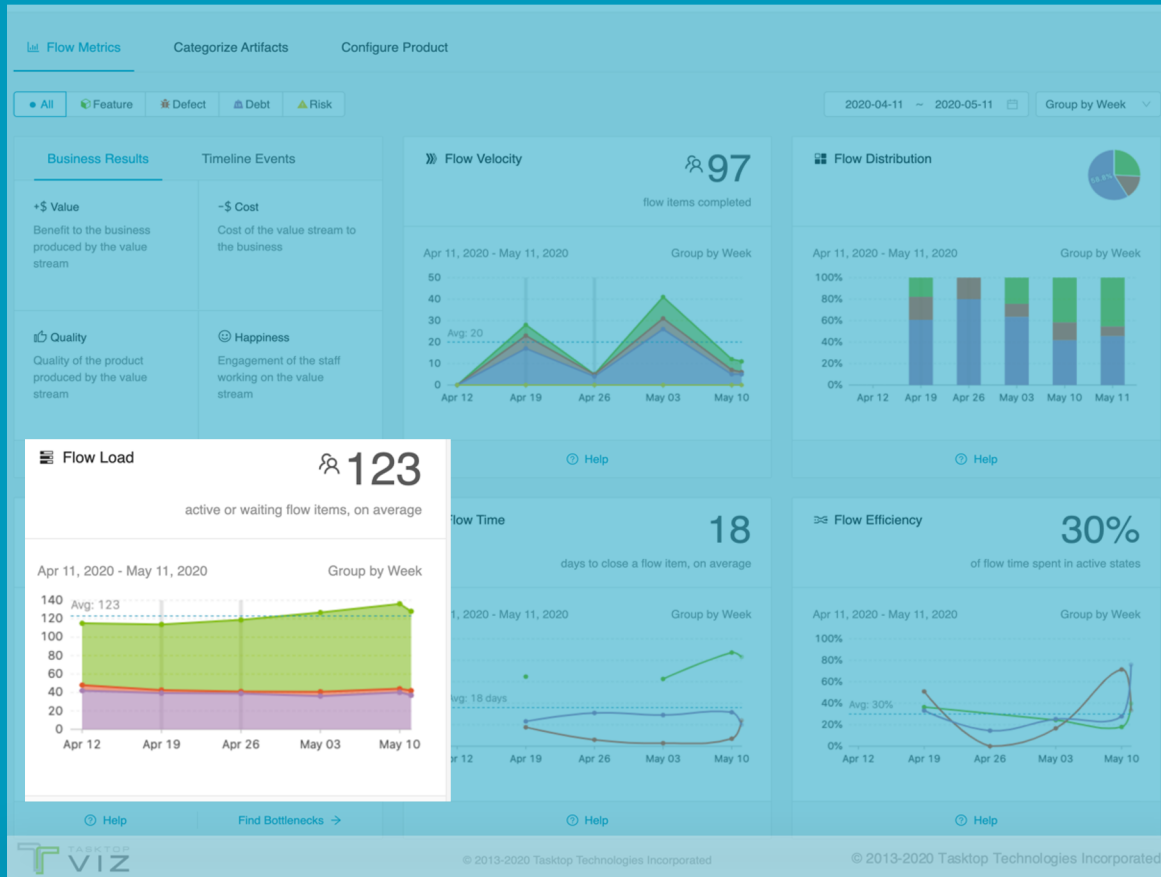
- IT can't keep up with the business



1. Flow Load is much higher than predicted based on Flow Velocity and Flow Time (queuing theory)



1. Flow Load is much higher than predicted based on Flow Velocity and Flow Time (queuing theory)
3. Based on monthly Flow Velocity, there is ~1.25 months of work in progress
3. Flow Efficiency is 30% indicating work spends a lot of time waiting



1. Flow Load is much higher than predicted based on Flow Velocity and Flow Time (queuing theory)
2. However, based on monthly Flow Velocity, there is ~1.25 months of work in progress
3. Flow Efficiency is 30% indicating works spend a lot of time waiting
4. Value stream is incurring the cost of delay. Must fix this first before looking at other improvement (e.g., WIP limits, breakdown of work).



Neglected WIP



**Overloading
organizational capacity**

FINDINGS



Value Stream dysfunction is going to grind productivity to a halt

FLOW SYMPTOMS



⬆️ *Flow Load* increasing

⬇️ *Flow Efficiency* is dropping



BUSINESS SYMPTOMS



- Feature work waiting indefinitely
- Losing credibility with customers
- Unplanned work chronically fast-tracked
- Frequent scope changes

MISTREATMENTS



- Push even more work to teams
- Suggest that teams get better at multi-tasking

TREATMENT PLAN



- Stop starting, start finishing
- Enforce WIP limits or pull model
- Add capacity to the most under-resourced constraint

CHECKUPS



- Improved *Flow Velocity*
- Improved *Flow Efficiency*
- Better predictability

“Flow Metrics exposed that our backlog was growing.. We now [see] the dynamics of how to manage the balance between backlog and other work”

Flow Diagnostic Workflow Obscurity





PATIENT

- Healthcare insurance company



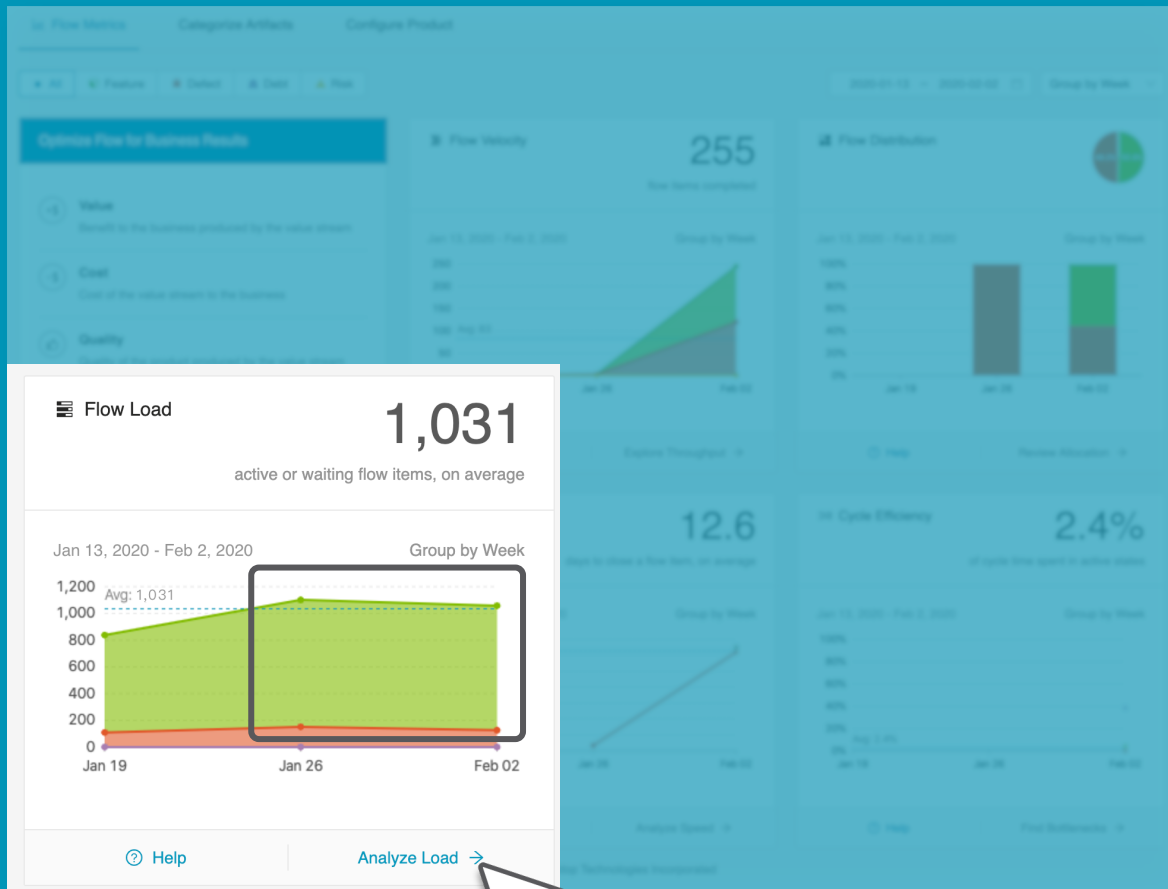
HISTORY

- Mature Agile deployment
- Shifted from Project to Product

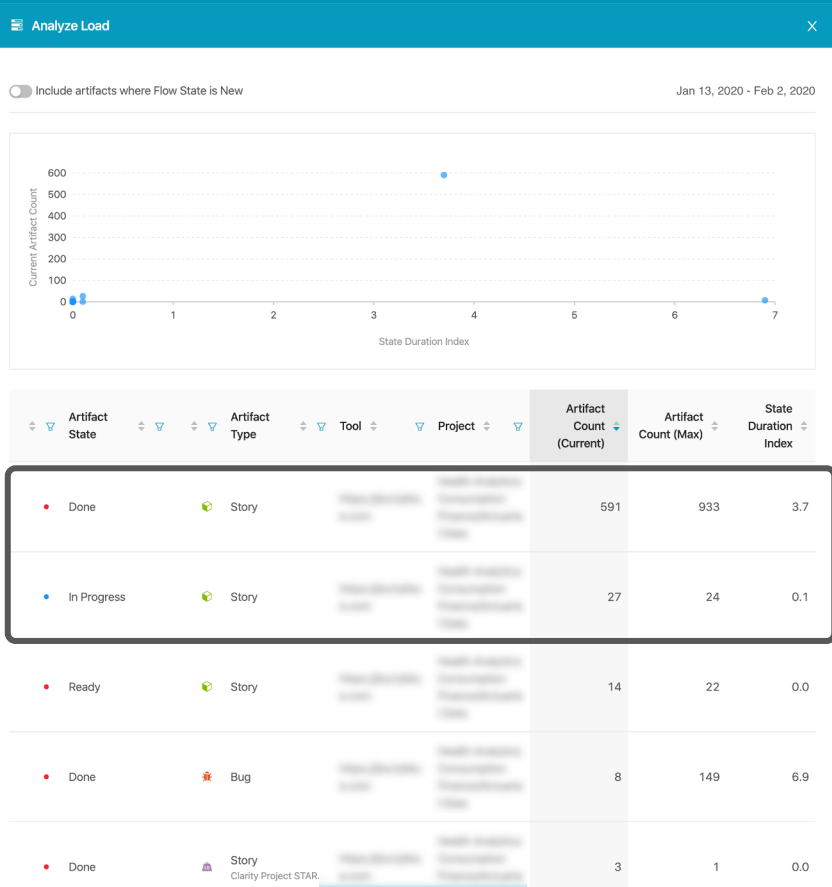


AILMENTS

- Dev is moving fast, but still not seeing enough business results



1. Hundreds of work items in progress, mostly features



1. Hundreds of work items in progress, mostly features
2. Done doesn't mean done?

Flow Metrics | Categorize Artifacts | Configure Product

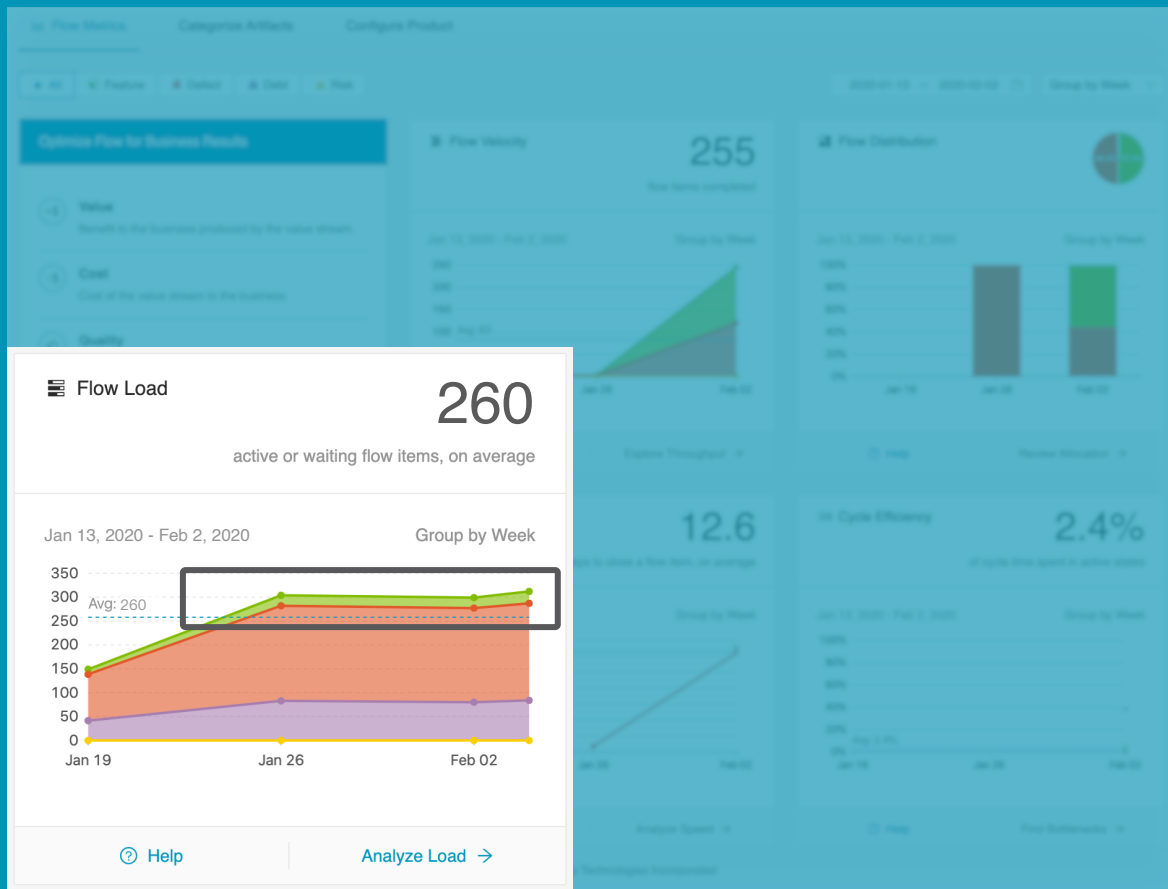
● Categorize artifacts and their states to generate flow metrics

[-] Collapse All | Hide Uncategorized Artifacts

Artifact Type	Tool	Project	Condition	Artifact Count	Flow Item
Bug				267	Defect
Story			Clarity Project STARTS WI...	282	Debt
Story			Remaining Artifacts	3,308	Feature
State of Story (11)					
Blocked				0	Waiting
Cancelled				423	Uncategorized
Code Review				0	Active
Done				591	Waiting
Implemented				2,149	Done
In Progress				27	Active
In QA				2	Active
Ready				14	Waiting
Ready for QA				2	Waiting
Review Complete				1	Waiting
To Do				99	New
In-Sprint Bug				66	Defect
Task				149	Uncategorized

1. Hundreds of work items in progress, mostly features
2. Done doesn't mean done?

According to the work process, Done is a wait state, followed by Implemented. But the process isn't being followed, creating a measurement black hole between Done and Implemented (released).



1. Hundreds of work items in progress, mostly features
2. Done doesn't mean done?
3. Changing the flow modeling enables "what if" analysis and immediately tells a very different story
4. **Value stream model change instantly reveals that development is not where things are piling up**

Workflow Obscurity



**Focusing on SAFe
vanity metrics**

FINDINGS



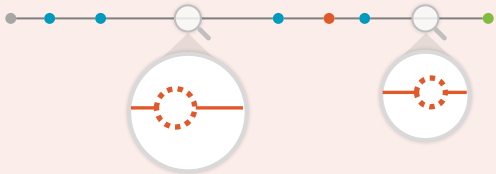
Bottleneck is hidden while dev is being blamed

FLOW SYMPTOMS



↯ Flow Load is artificially high

⊘ Business Results are not improving



BUSINESS SYMPTOMS



- Customers perceive a lack of innovation
- Bottlenecks constraints are not visible
- Psychological safety to make work visible may be lacking

MISTREATMENTS



- Keep optimizing around silos

TREATMENT PLAN



- Shift from team focus to customer focus
- Identify handoffs and manual processes constraints
- Include all cross-silo handoffs and manual processes

CHECKUPS

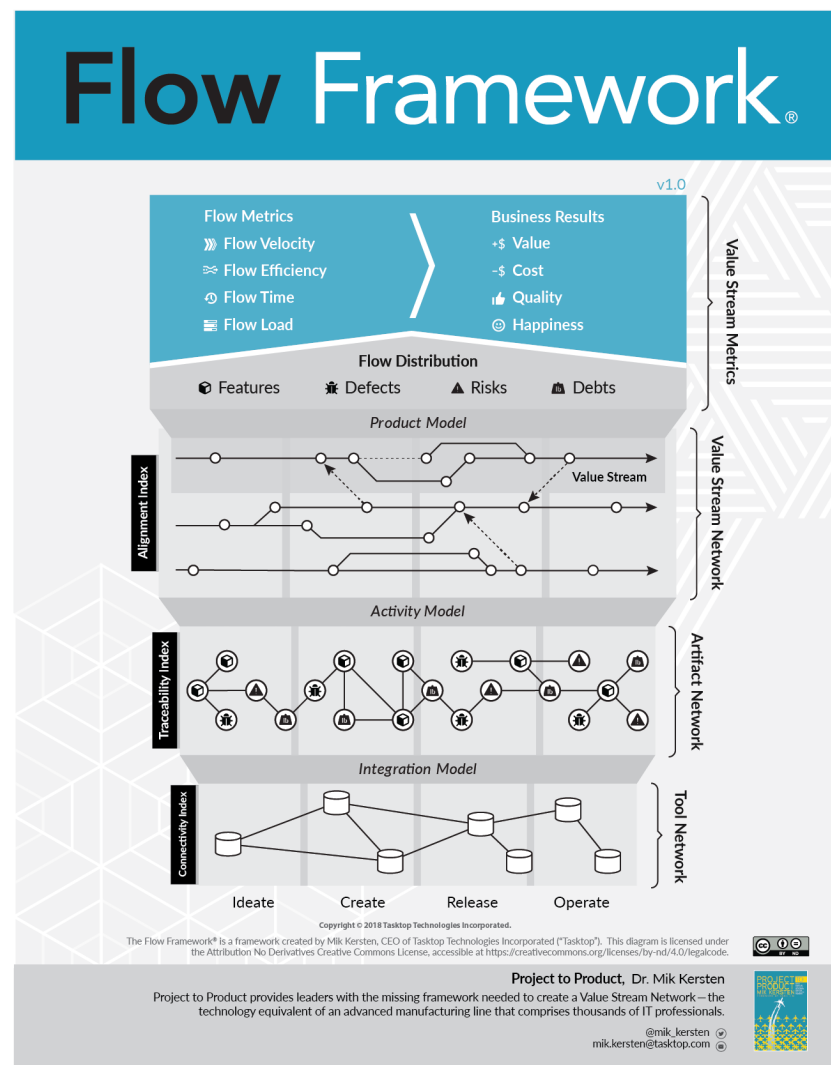


- *Flow Time* is dramatically reduced
- Bottlenecks visible via wait states
- Customers satisfaction increases

“We were able for the first time to get resources allocated to us outside of a budgeting cycle based on taking this live data to our CIO.”

Conclusion

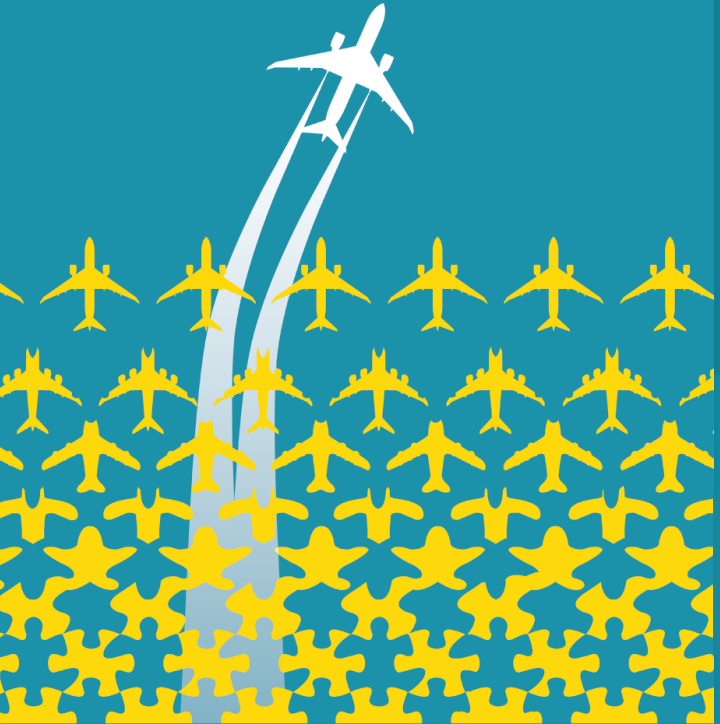
- Can't change a system from within the system: measure outside in
- Complex dynamics mean you should focus on trends, not absolute values
- Help leaders leverage their 'other senses': stop talking cycle time, start measuring flow time, relate it to time to value and business results



PROJECT TO PRODUCT

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HOW TO
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TASKTOP

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SUMMIT

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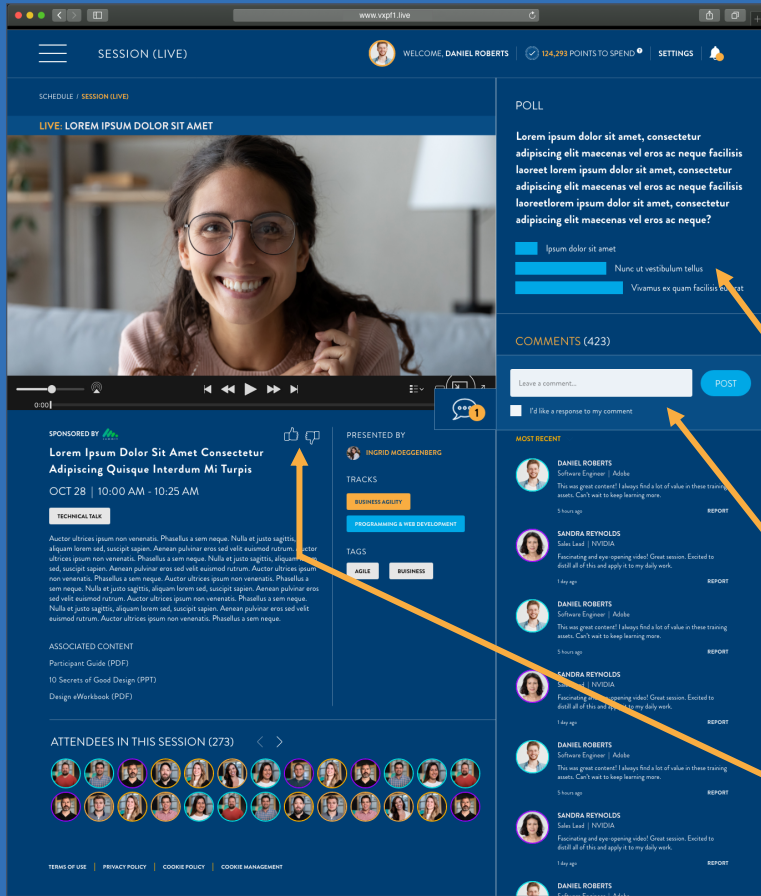
flowframework.org (new portal)

All author proceeds go to charitable programs supporting women & minorities in technology.

Join me at the Meet the Speaker Session!



Please refer to the agenda for scheduled times



Participate in polling, post comments, and rate sessions

1

Polling

2

Comment

3

Thumbs up or down

Thank you!