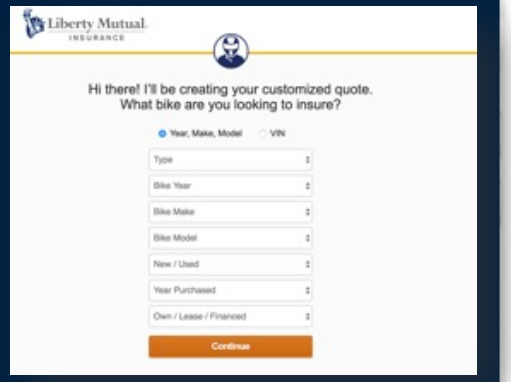
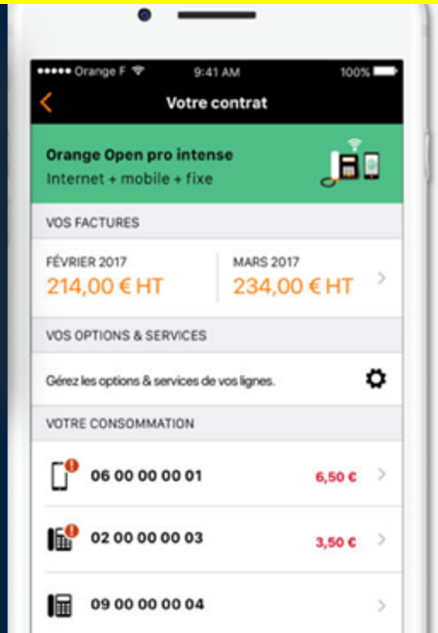
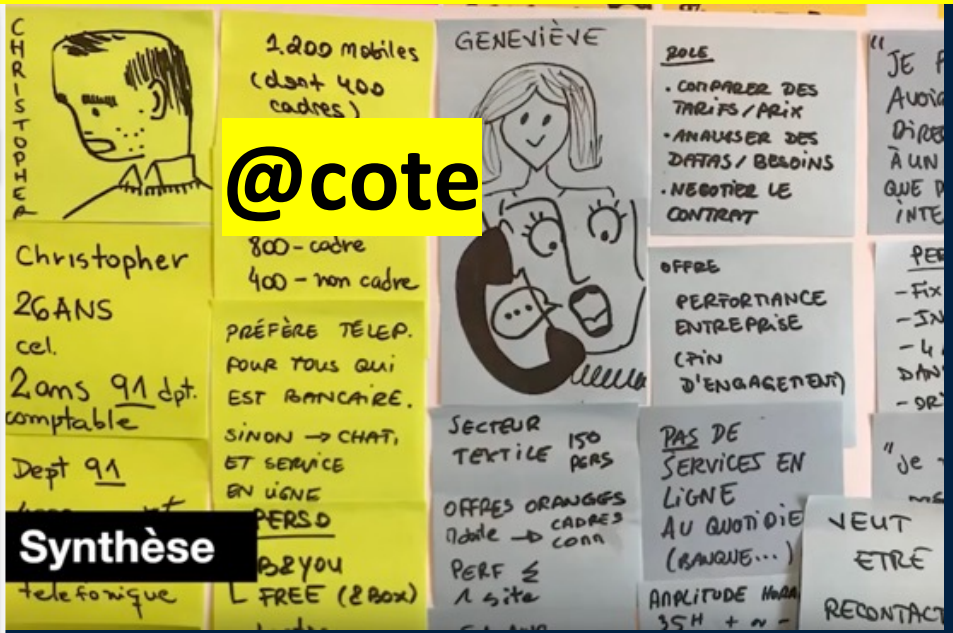
Beyond DevOps Metrics

Technical, business, & culture metrics for the software defined business







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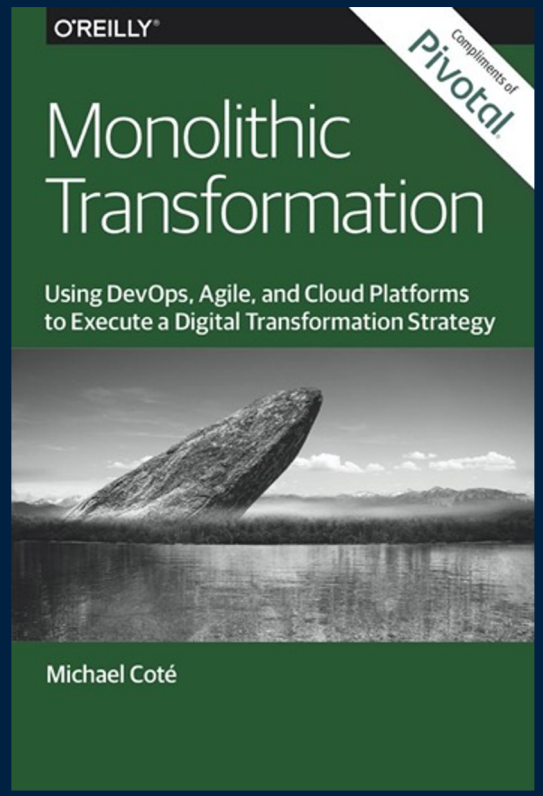

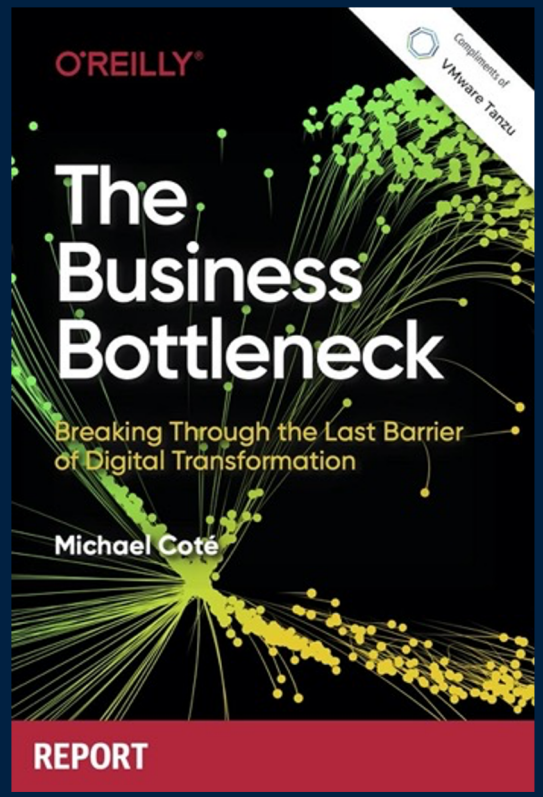

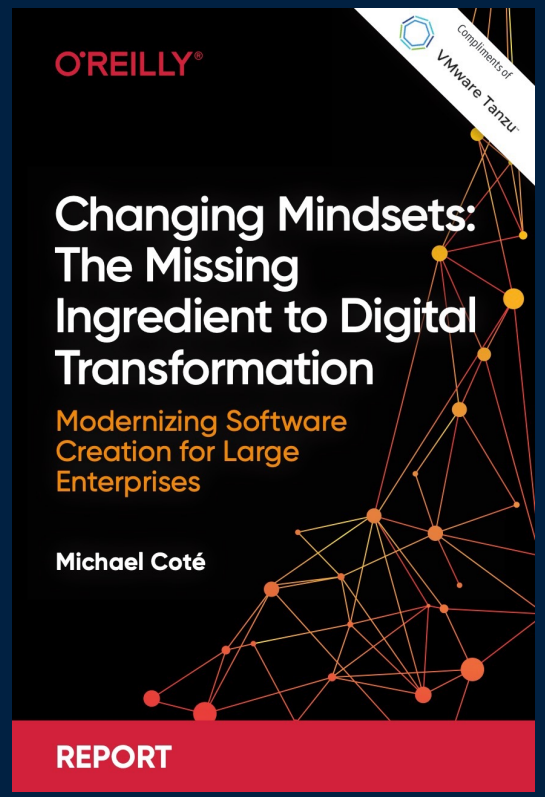

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Use metrics to manage and build trust

DevOps/Technical

Are we doing it right? Does the software work? Can we troubleshoot & restore?

1. Deployment frequency
2. Lead time for changes
3. Time to restore service
4. Change failure rate

Also, SRE: latency, traffic, errors, saturation.

Business

Are we achieving the non-IT goals we're here for? (What even are those goals?)

1. Sales/workflow completion
2. Use
3. Costs – time, money
4. Cost per transaction
5. Customer experience and satisfaction

Culture

Are the executives building the right system?

1. Employee NPS (eNPS)
2. Staff belief in leaders, mission, and strategy
3. # of experiments, learning
4. Staff retention and churn rate

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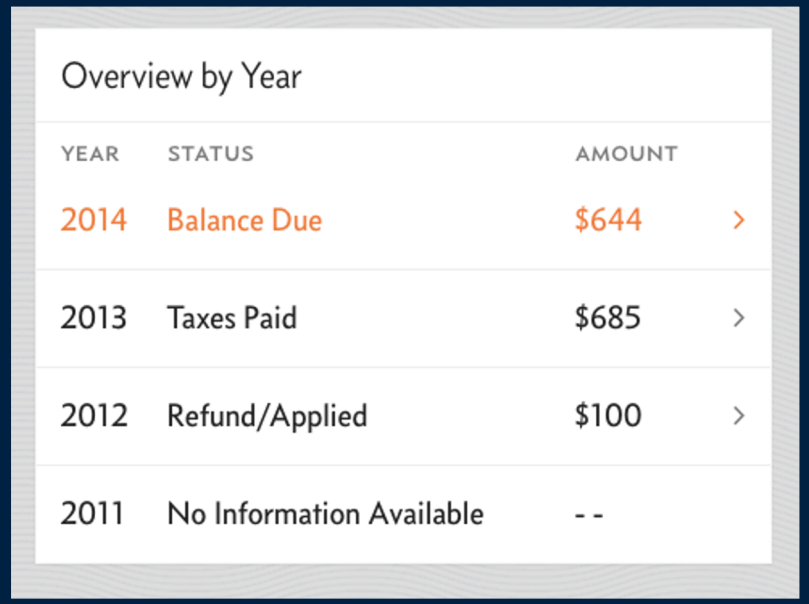
Source: see three part series on metrics for more and for sources.

From 37% availability to $440m in back taxes

Before



After

Only 37% of calls answered, shrinking budgets

From 2 year to 9 week releases

2m+ users paid $440m in taxes

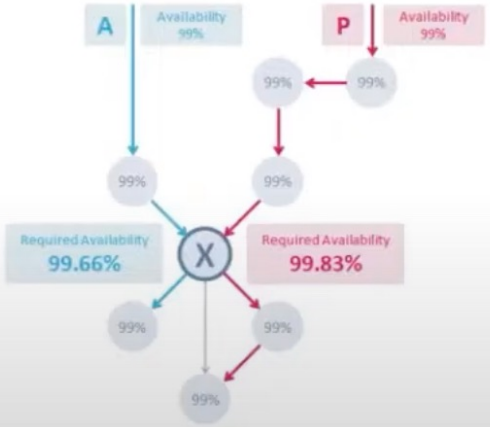
Sources: "'Your IRS Wait Time is 3 Hours' - Is Lean Possible in Government?", Emily Price, Pivotal, April 2017; "Agile Transformation is Product Management," podcast, Oct 2017; "Minimum Viable Taxes: Lessons learned building an MVP inside the IRS," slides, Andrea Schneider & Lauren Gilchrist, 2015. See another write-up.

Add in flow metrics

Mphasis Approach to Observability in Enterprises

Team Topology

Measure Flows
(not just applications & workloads)



Improve Flow Metrics

MTTR
Mean Time To Recovery

MTBF
Mean Time Between Failures

TAT
Turn Around Time

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Source: "Scaling Enterprise Observability on Tanzu Foundations, Nitin Gokhale and Uday Tangs, Olivier Fay, SpringOne 2021.

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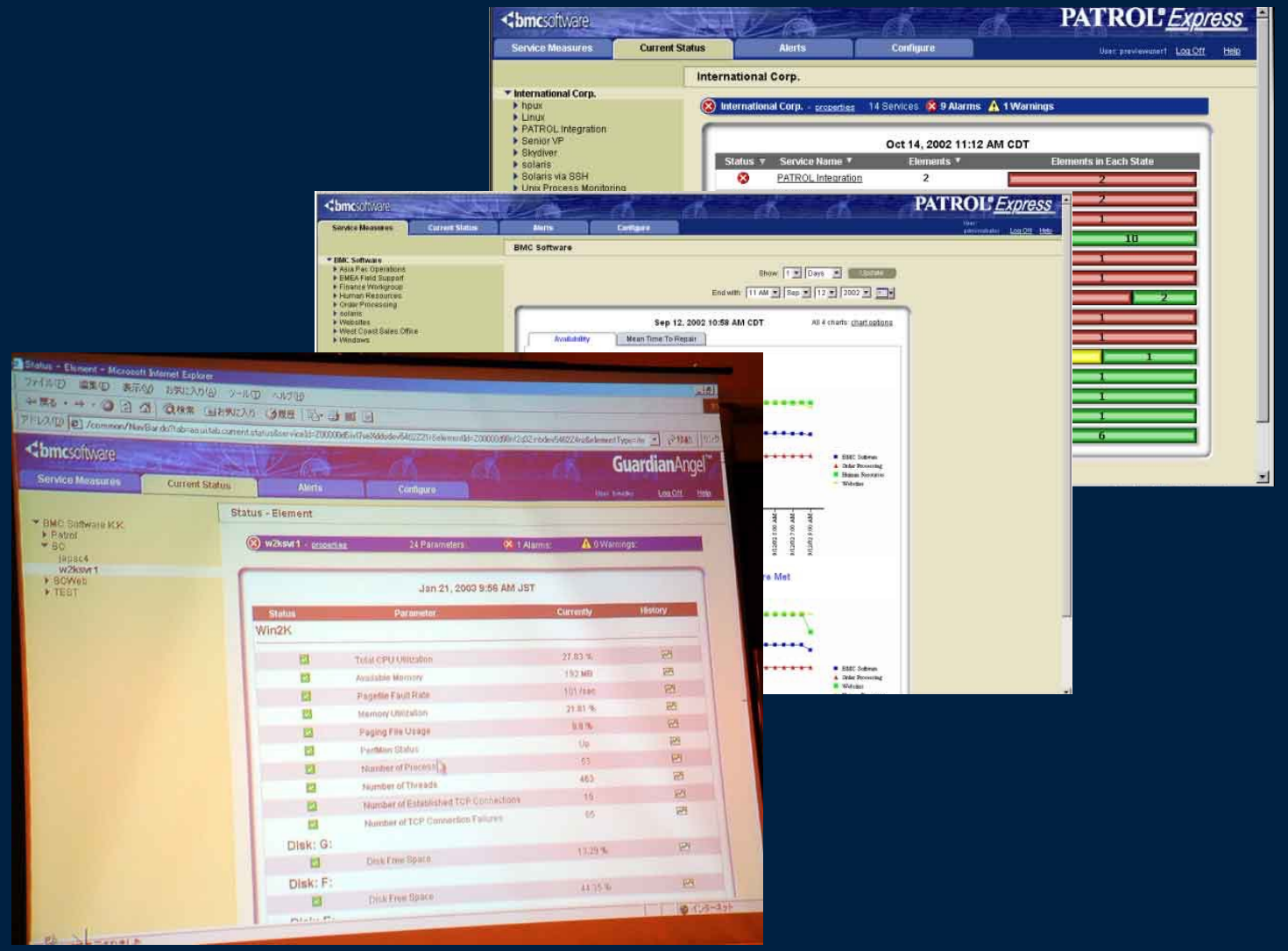
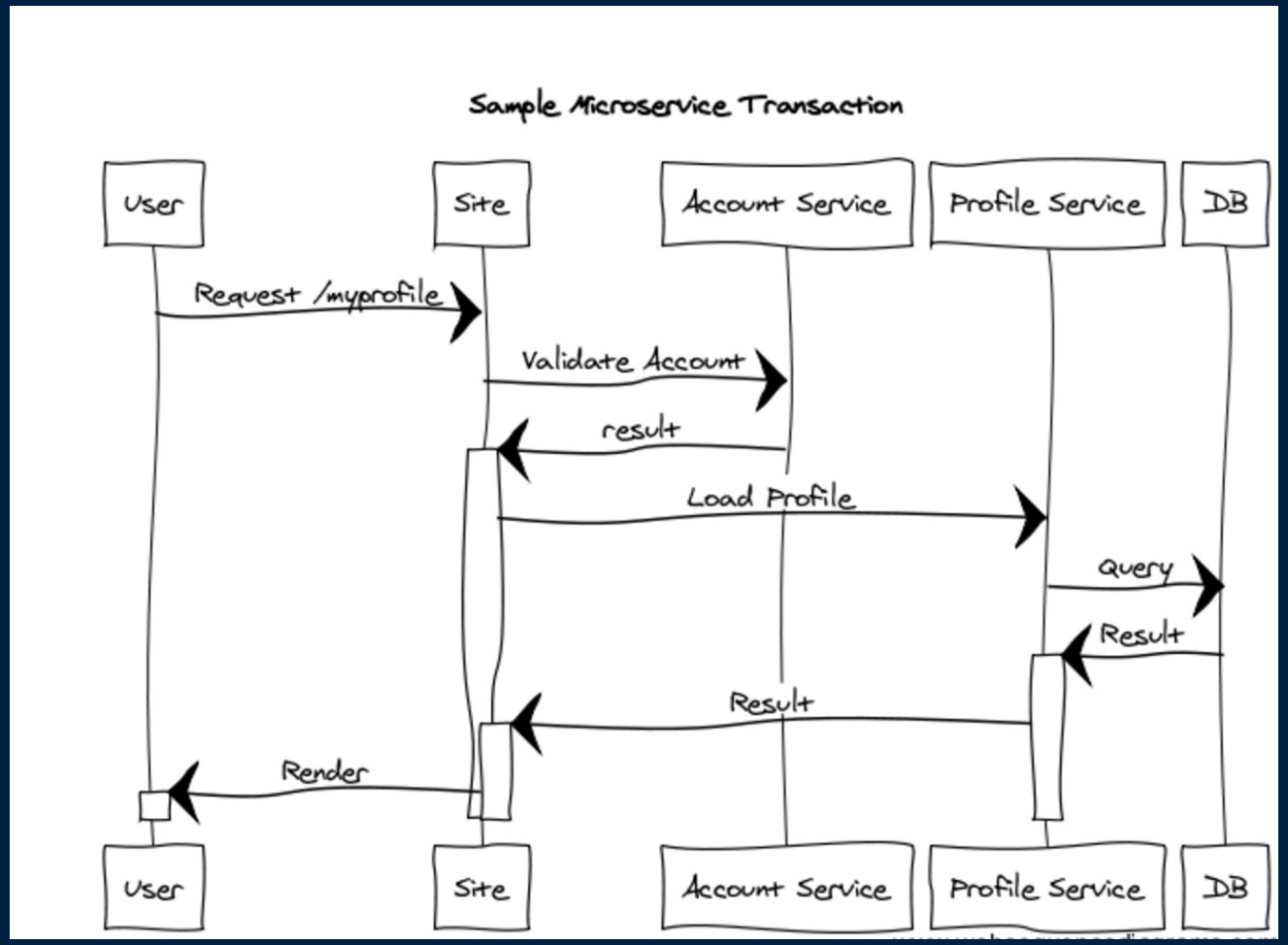


Source: see three part series on metrics for more and for sources; pictures from 2003 PATROL Express article at Internet Watch (JP).

Tracing – programmers can now add instrumentation



Origination ID	Span ID	Activity
`abc123`	`span1`	User Requests the page `/myprofile`
`abc123`	`span1`	Page calls account service
`abc123`	`span2`	Account service handles request
`abc123`	`span1`	Page calls profile service
`abc123`	`span3`	Profile service handles request
`abc123`	`span3`	Profile service queries database
`abc123`	`span1`	Render requested page

Source: "Implementing Distributed Tracing," Tanzu Development Center Guide.

Business

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Just 24% of devs measure their success in terms of business value metrics

Source: *Changing Mindsets: The Missing Ingredient to Digital Transformation*, Coté, May 2021. 24% figure from "Digital Transformation Requires Development Transformation", Forrester, Jeffrey Hammond, Diego Lo Giudice, Christopher Condo, Dec 2020.

“Most of our software development is supporting legacy capabilities that are in-house and don’t provide a competitive advantage, which is opposite of what I would want to have.”

CIO at US Retail Company

- **76%** of executives said they are too invested in legacy applications to change.
- **69%** of executives say high technical debt is very or extremely important to overcome to improve apps.
- **48%** say it has been more than a year since they made improvements to their application portfolios.

Sources: “Improving Customer Experience And Revenue Starts With The App Portfolio,” Forrester Consulting, commissioned by VMware, March, 2020. Survey conducted July to Oct. 2019 with 614 respondents and six CIO/SVP interviews.

Culture

Are the executives building the right system?

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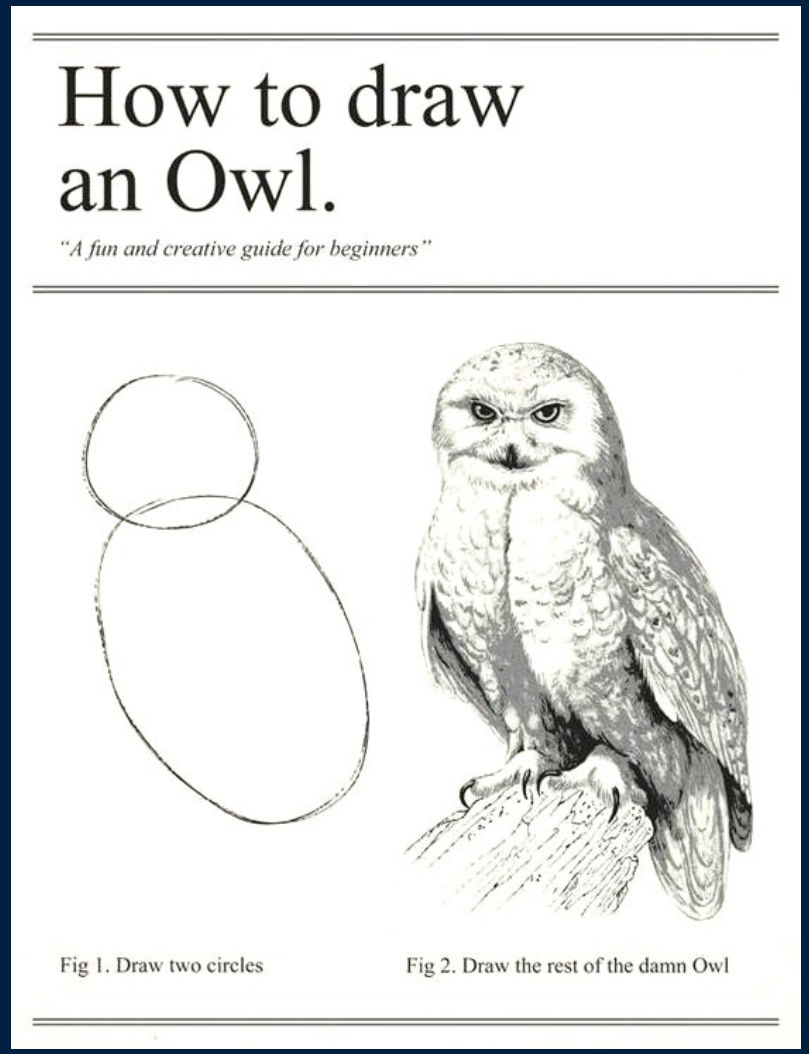
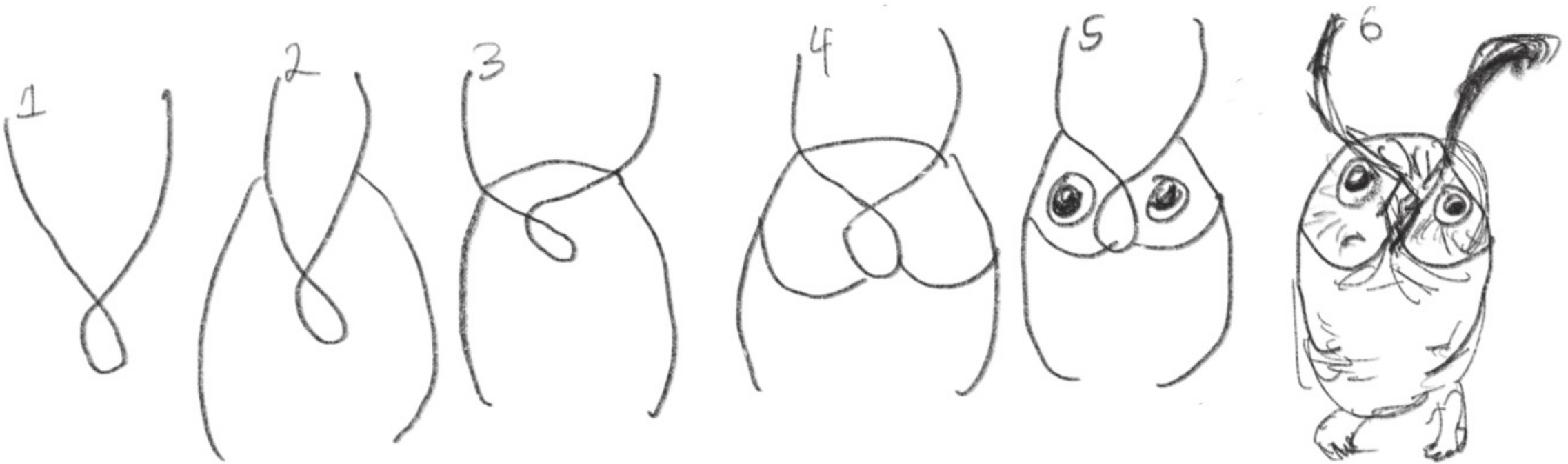


Source: *Changing Mindsets: The Missing Ingredient to Digital Transformation*, Coté, May 2021.

Metrics Build the Trust Needed to Change Culture

- Showing progress
- Feedback on what works
- Transparency

Source: *Changing Mindsets: The Missing Ingredient to Digital Transformation*, Coté, May 2021.



Thanks!

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