


AGENDA

Using Evidence-Based Management to help choose the right things to measure.

1. WHY
2. COMMON METRICS
3. KPIS
4. EVIDENCE-BASED MANAGEMENT
5. FRAME THE PRODUCT/PROJECT



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Using Evidence-Based Management to help choose the right things to measure.

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Read the EBM Guide at:
scrum.org/ebm



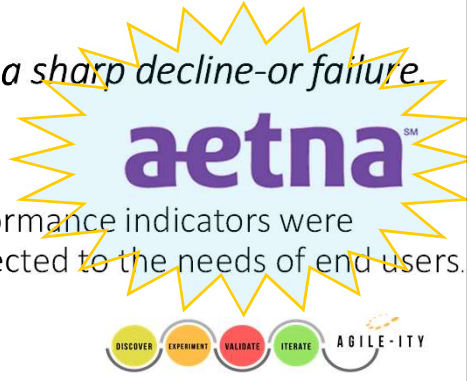

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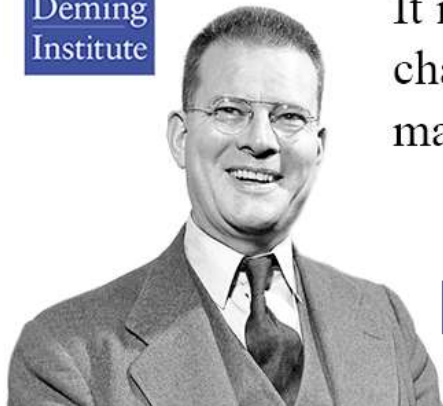
Thoughts? This why we should care.
 Old ways of measuring success can lead to a sharp decline-or failure.



Aetna's primary performance indicators were not adequately connected to the needs of end users.



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It is not necessary to change. Survival is not mandatory.

W. Edwards Deming

source: quotes.deming.org/10083



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Common Metrics

- Velocity
- Commitment Reliability
- Capacity Utilization
- Estimation Variance
- Scope Change
- Backlog Health
- Time Spent
- Budget Adherence
- Schedule Adherence

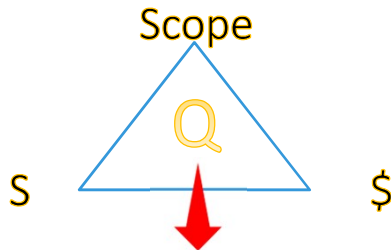
- *Can these metrics all look pretty good, but your project or product be unsuccessful?*
- *Examine whether your metrics are consistent with the things your customers value most.*



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Outcomes Over Output

- Fundamental distinction between a mechanical versus an outcome mindset.



A Mechanical mindset uses a factory model
An Outcome mindset is knowledge-oriented

Problem: We need a way to better connect the customer to the things that we manage and measure.



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DEFINITION



KPI = KEY PERFORMANCE INDICATOR

Key performance indicators are a set of quantifiable measures that a company can use to evaluate its performance. The KPIs used to measure success or failure vary from company to company.

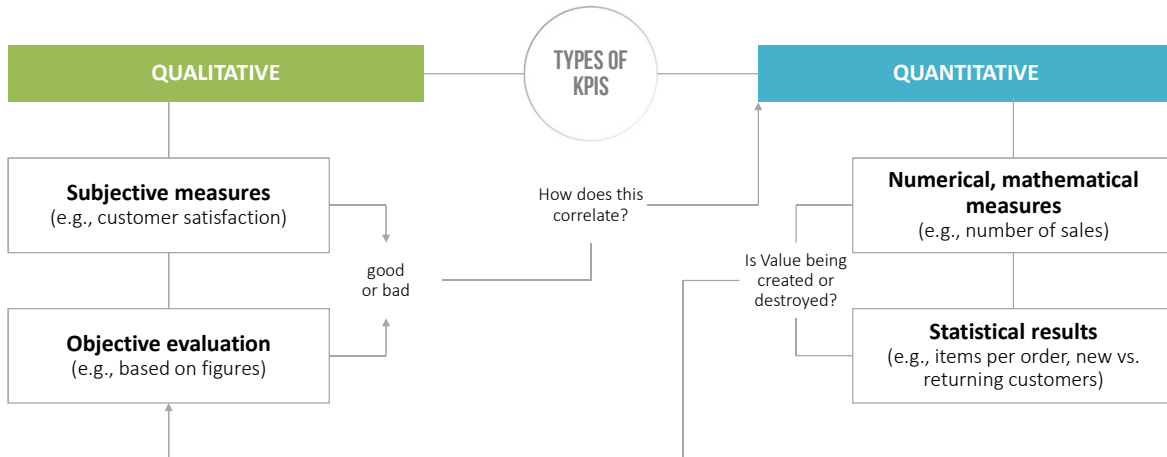
Unless the KPI can be tied to a business objective or results, it is just a VANITY METRIC.



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TYPES OF KPIS

Qualitative & Quantitative



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TYPES OF KPIS

Lagging & Leading KPIs



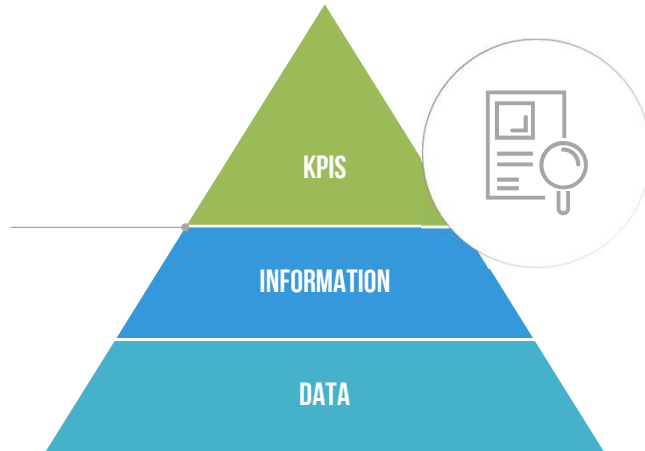
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FUNCTIONS

Summarize and Facilitate

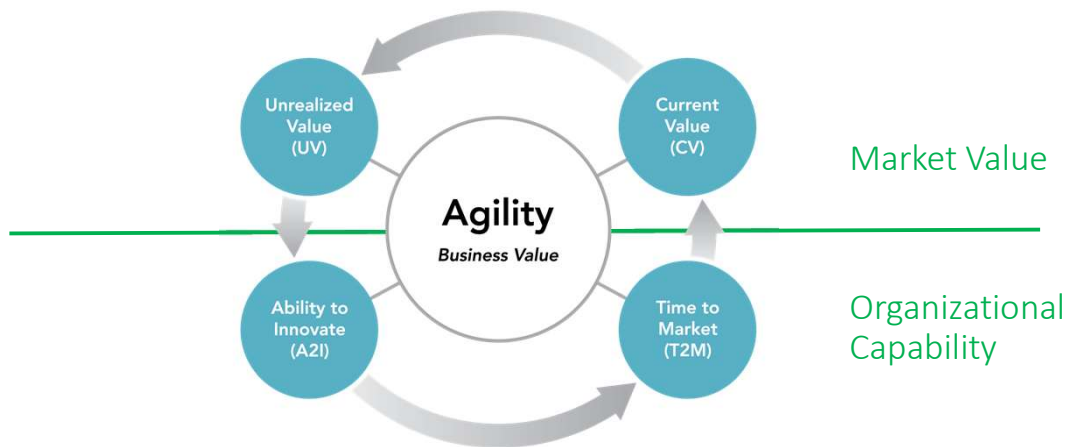
KPIs reduce a large amount of data into a practical number of important indicators.

The only way to determine the right KPIs to track is to speak with your business leaders and customers to understand what truly matters to them.



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Evidence Based Management Framework

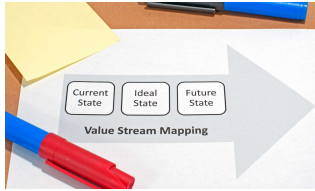


Measurement is strategic in nature. It can help us know if we are moving closer to the goals of the organization.



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Key Value Area **Current Value (CV)**



Reveals the value that the organization delivers to customers, today.

Goal: to maximize the value that an organization delivers to customers and stakeholders at the present time; it considers only what exists right now, not what it *might* do in the future.

Questions:

- How happy are customers today? Is their happiness improving or declining?
- How happy are employees? Is their happiness improving or declining?
- How happy are investors and other stakeholders? Is their happiness improving or declining?



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Example measures - Current Value

Leading indicators

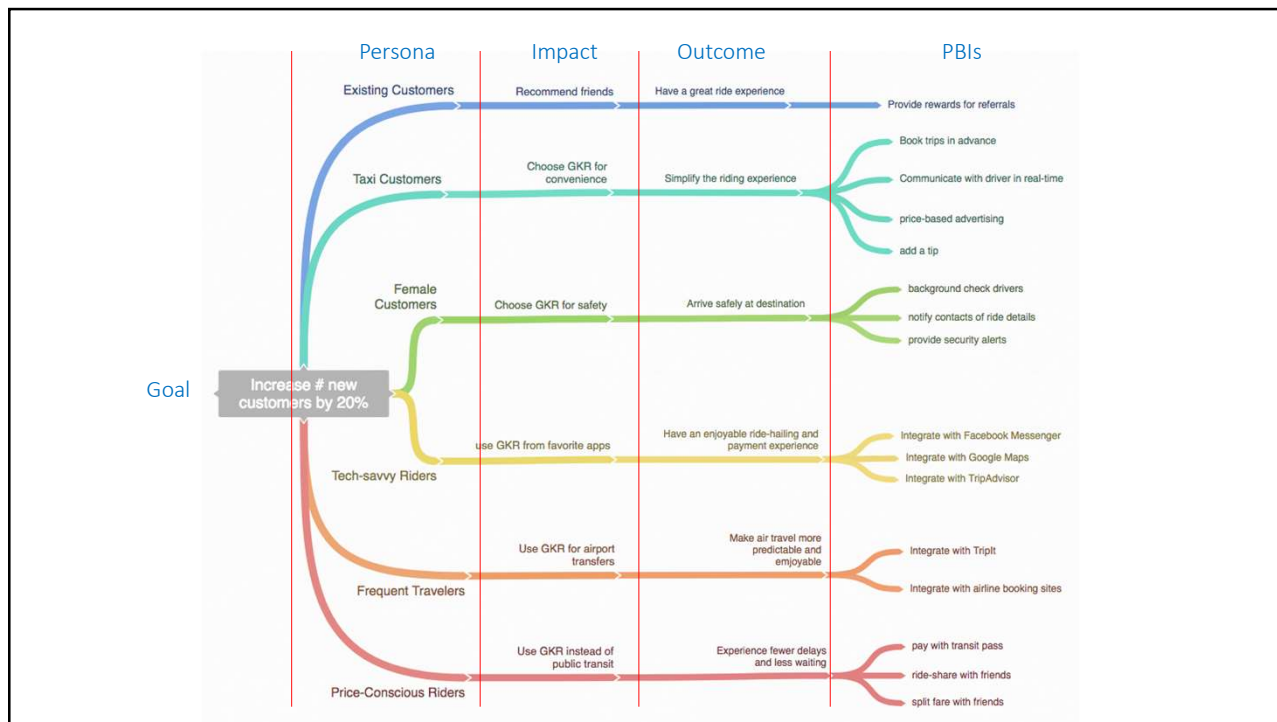
- Employee Satisfaction
- Customer Satisfaction
- Investor Satisfaction
- Usage Index

Lagging indicators

- Revenue per Employee
- Product Cost Ratio



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Securing Success by Securing Scope?

Too many products are designed on the premise that the initial information and assumptions are valid throughout the entire planning horizon.

Regulatory projects are always at risk of over compliance due to a combination of both legal and technical jargon that is seldom specific on what is truly required. Talk to the the regulators on a regular basis to obtain clear validation.

Usage	Percentage
Never	45%
Rarely	19%
Sometimes	16%
Often	13%
Always	7%

Value Category	Percentage
Average Value	46%
High Value	27%
Low Value	11%
Very High Value	13%
Very Low Value	4%

The reported value returned for projects that met the triple constraints.

Usage	Percentage
Hardly Ever	50%
Infrequently	30%
Often	20%

The Standish Group estimate of features used in custom application development.

Scrum.org/PSPO

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Key Value Area

Unrealized Value (UV)



The potential future value that *could be* realized if the organization was able to perfectly meet the needs of all potential customers.

Goal: to maximize the value that the organization realizes from a product over time.

Questions:

- Can any additional money be made in this market?
- Is it worth the effort and risk to pursue further returns in this market?
- Should further investments be made to capture additional Unrealized Value?



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UV - Example measures

Leading indicators

- Competitor strength/weakness
- Customer acquisition or defection
- Regulatory changes

Lagging indicators

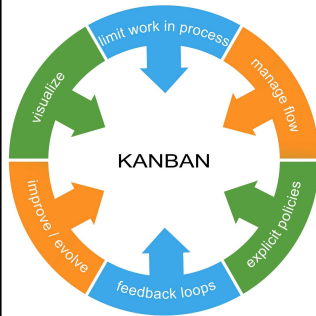
- Market share trends
- Overall market growth/decline relative to market share trends



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Key Value Area

Time to Market (T2M)



The organization's ability to quickly deliver new capabilities, services, or products.

Goal: to minimize the amount of time it takes for the organization to deliver value.

Questions:

- How fast can the organization learn from new experiments?
- How fast can you learn from new information and adapt?
- How fast can you deliver new value to customers?



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T2M - Example measures

Leading indicators

- Frequency of Build Success
- Build pass/fail trends
- Release Stabilization trends
- MTTR

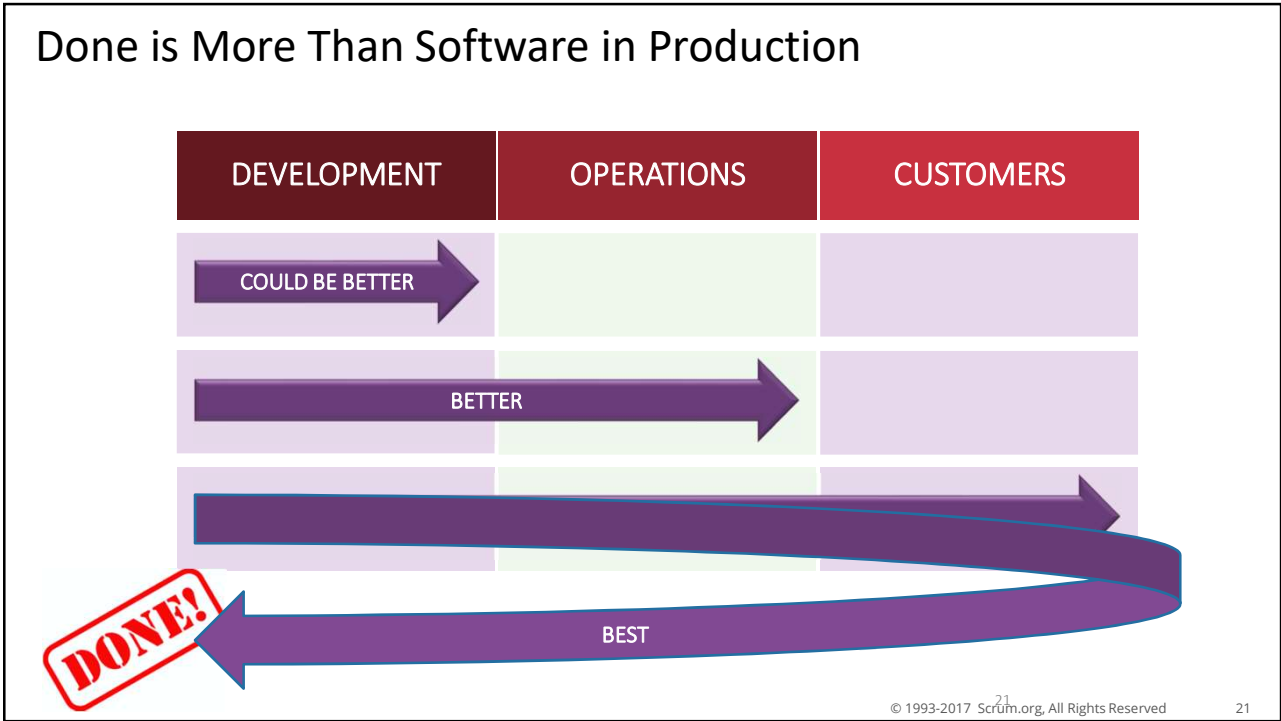
Lagging indicators

- Cycle Time (start of release work till release)
- Release Frequency
- Lead Time (idea proposed until value realization)
- Time to Learn (time from idea to impact)



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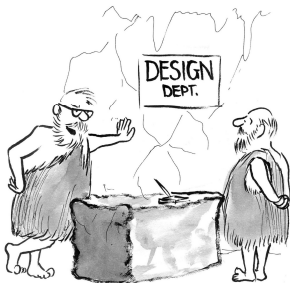
Done is More Than Software in Production



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Key Value Area

Ability to Innovate (A2I)



"The wheel was great. What have you done for me lately?"

The ability of a product development organization to deliver new capabilities that might better meet customer needs.

Goal: to maximize the organization's ability to deliver new capabilities and innovative solutions.

Questions:

- What prevents the organization from delivering new value?
- Have we considered limiting Work in Progress?
- What prevents customers or users from benefiting from that innovation?

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Ability to Innovate - Example measures

Leading indicators

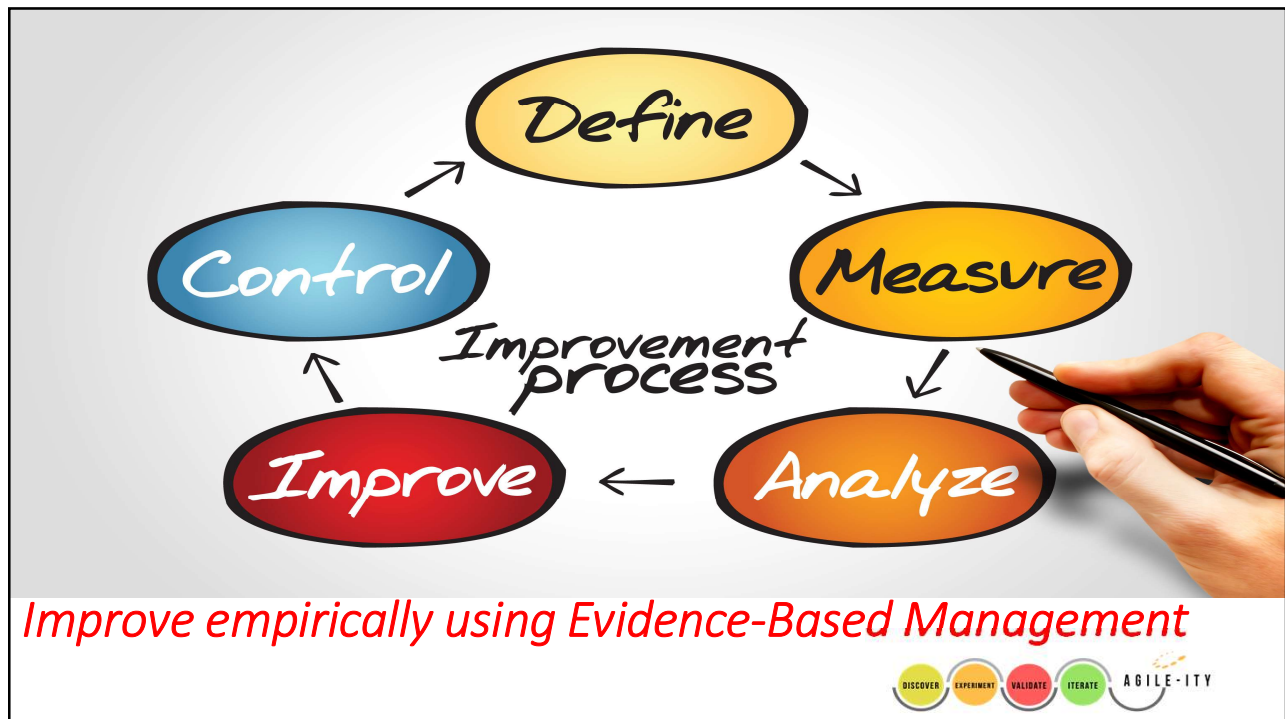
- Technical Debt trends
- Architectural Coupling
- Defect trends
- Production incident trends
- Downtime trends
- Number of active branches, time spent merging
- Time spent context-switching
- Velocity trends

Lagging indicators

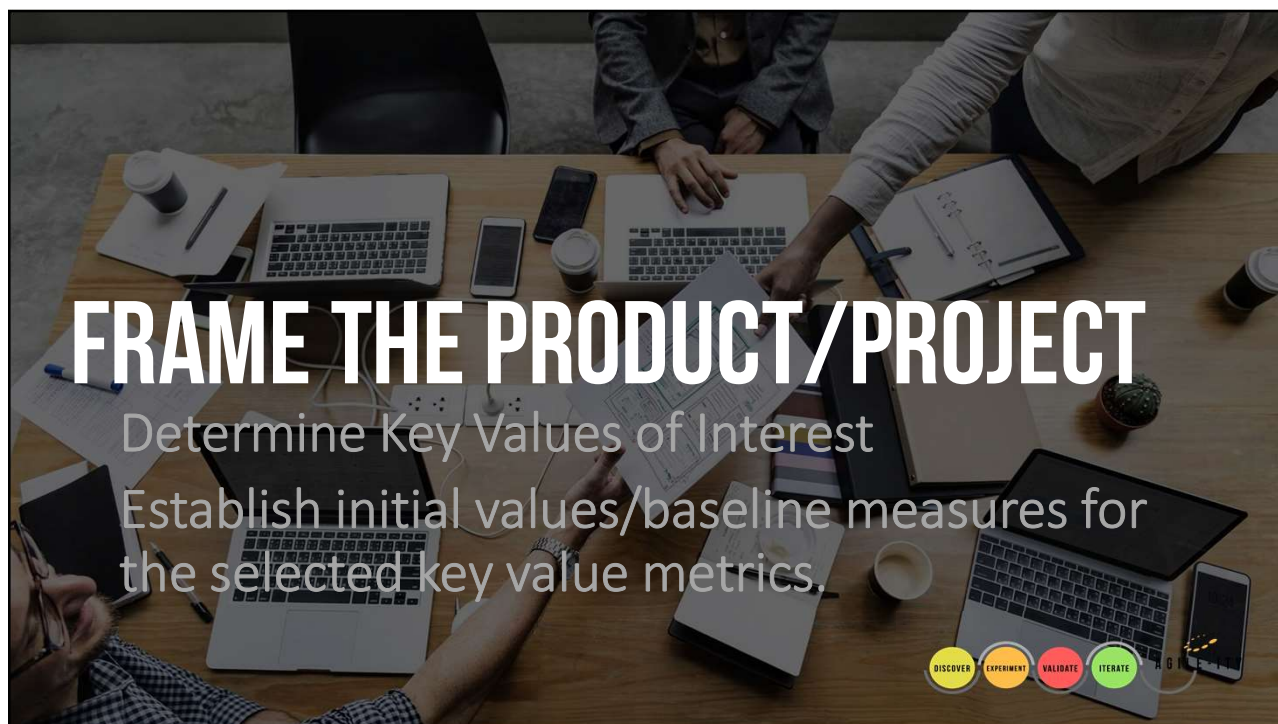
- Innovation Rate
- Installed Version Index
- Feature Usage Index



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Metrics Working Session

- Do we understand what our customers really value?
- Will the customers of tomorrow define quality differently from the way today's customers do?
- How closely do our customer satisfaction and financial metrics correlate?
- Are we measuring units and volumes, or outcomes?
- Do our products or services have more features or complexity than most of our customers value?
- Is there a new metric that aligns with the needs of future customers?



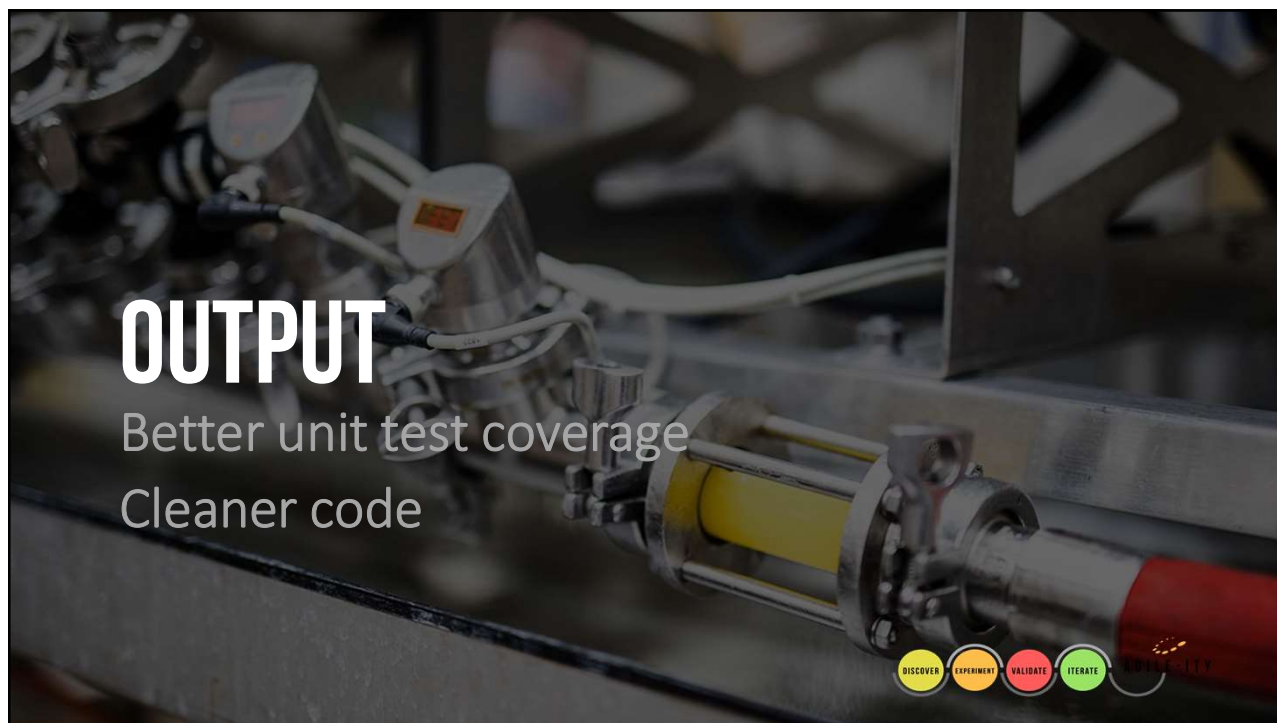
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Determine the most impactful Key Value Area to focus on first and begin to run small quick experiments.

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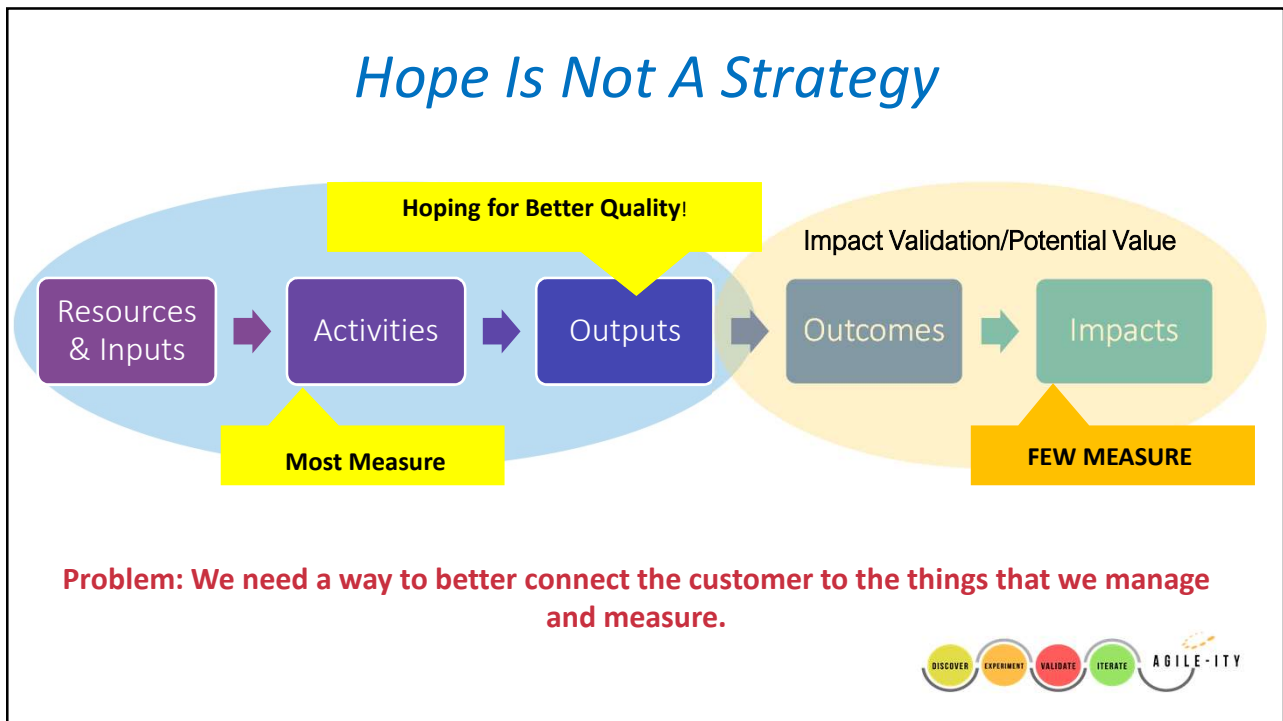
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Hypothesis

Experiment

Results

Conclusions

Continue the Hypothesis, Experiment learning loop to improve by sensing and responding.

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DISCOVER EXPERIMENT VALIDATE ITERATE AGILE-ITY

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QUOTATIONS

” What gets measured, gets managed.
Peter Drucker

” The essence of strategy is choosing what not to do.
Professor Michael Porter

Lets choose not to focus exclusively on outputs because our customers and investors care about outcomes!

DISCOVER EXPERIMENT VALIDATE ITERATE AGILE-ITY

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Closing Words

- Measure success in terms of value and outcomes, not output and progress.
- Celebrate success and learn what helped create it.
- Focus on improving results. EBM provides a holistic view.
- Maximize learning to become wiser and better.
- Do the best you can. The result will be far better than fearing failure and doing little.

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- What do you want to achieve?
- Take a small step and evaluate
- Did that help? If not make another hypothesis and try again
- Stay aligned with your mission and goals.



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