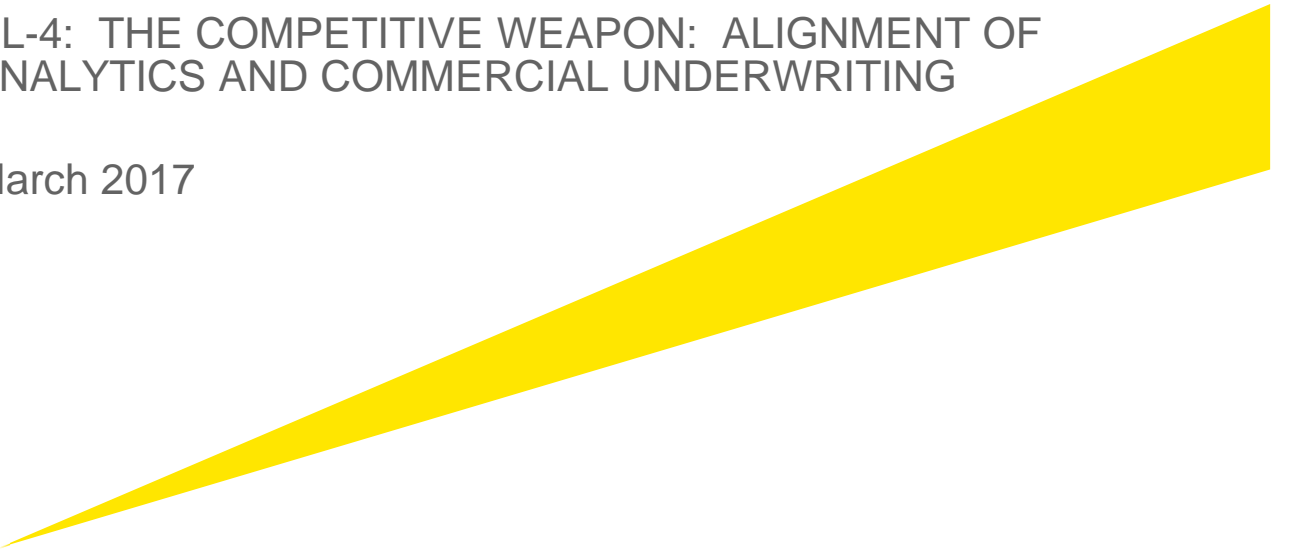


# CAS Ratemaking and Product Management Seminar

CL-4: THE COMPETITIVE WEAPON: ALIGNMENT OF ANALYTICS AND COMMERCIAL UNDERWRITING

March 2017



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# Antitrust Notice

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- ▶ The Casualty Actuarial Society is committed to adhering strictly to the letter and spirit of the antitrust laws. Seminars conducted under the auspices of the CAS are designed solely to provide a forum for the expression of various points of view on topics described in the programs or agendas for such meetings.
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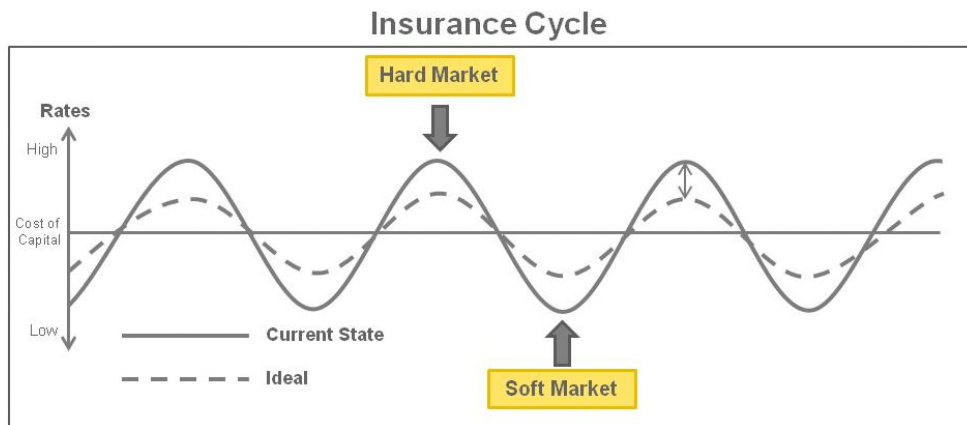
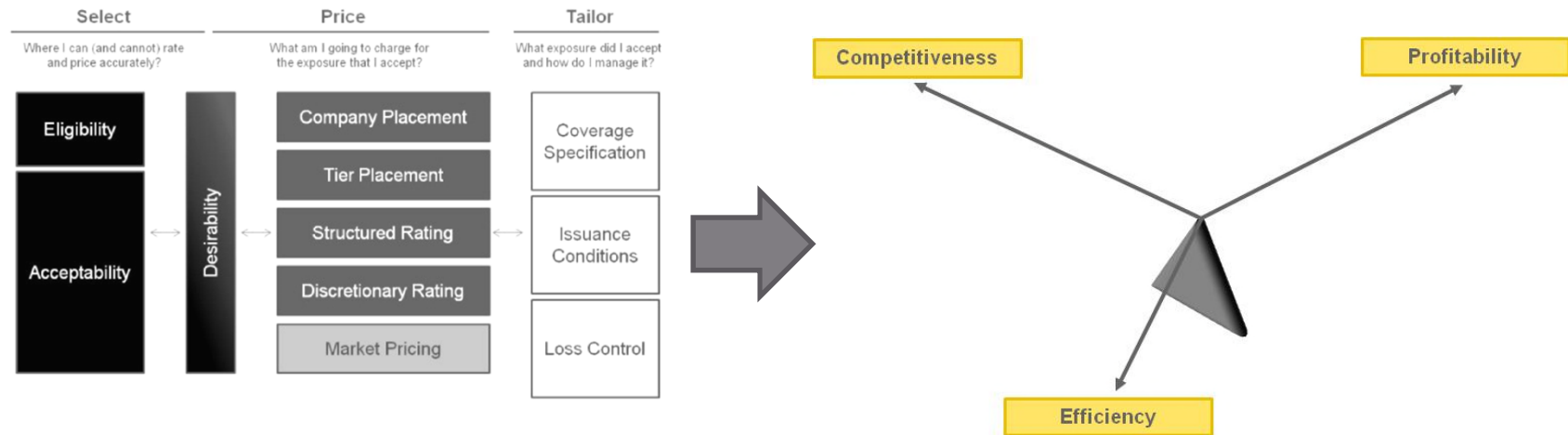
## Polling Question #1:

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Which of the following best describes your experience to date in implementing Predictive Models?

- Focus on the science of developing an indicated model; minimal involvement in the actual user implementation
- Limited involvement in the science of developing a model; focus on integrating the model into existing processes and rolling it out
- End to end involvement in science of developing model through actual implementation with end users
- End user, not involved in development or implementation
- None of above

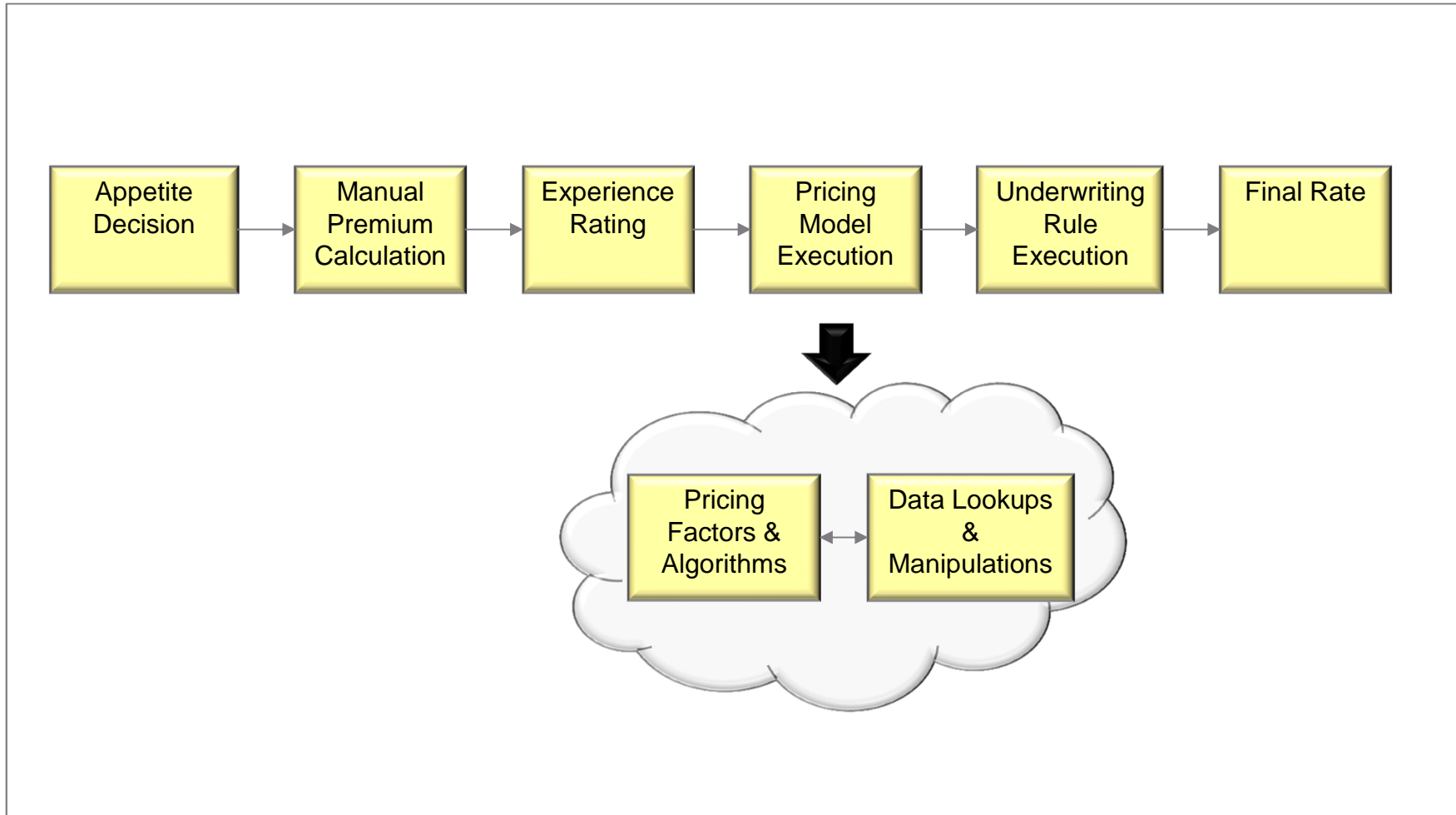
# The goal of Underwriting is to align our selection, pricing, and tailoring of risk in a way that balances competitiveness, profitability, and efficiency through market cycles.



Economic value is created through more consistent performance in hard and soft markets. This stability will amplify long term results because agents will gravitate towards stable markets.

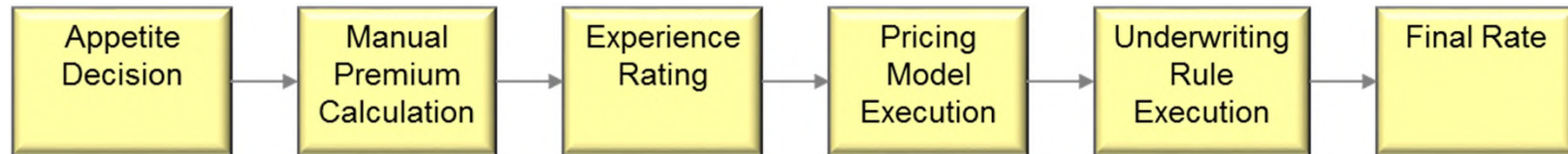
# Business Background

## Typical Flow for Small & Middle Market Commercial Underwriting Logic



# The Challenge

Disparate Technology Platforms & Organizational Boundaries Inhibit Logic Orchestration and Consistent Use of Data



Process	Typical Author(s)	Typical Platform(s)
Appetite Decision	Product Management/Underwriting	Rules Engine / Underwriting System
Manual Premium Calculation	Rate Actuary	Rating Engine
Experience Rating	Underwriting/Rate Actuary	Rating Engine
Pricing Model Execution	Actuarial	Modeling Tool
Underwriting Rule Execution	Underwriting	Rules Engine
Final Rate	Rate Actuary	Rating Engine

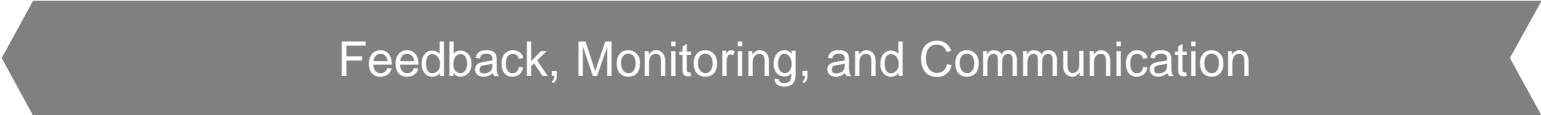
Resulting In:

- Undesired weighting of underwriting variables across underwriting process
- Inability to analyze data and decision impacts across platform
- Inefficient technology implementation practices for deployment of logic modifications

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# Commercial Modernization proceeds through a sequence of stages with a strong feedback loop

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## Polling Question #2:

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Architecture/Design: which approach would you recommend?

- Have complete and final Design before moving on to Build/Development
- Have a vague idea of Design, but let the Build drive it
- Have a defined Design before starting Build, but then a feedback loop to fine-tune the Design
- None of above



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## Commercial Modernization proceeds through a sequence of stages with a strong feedback loop

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Question #1: How critical to success is establishing early anchors points around vision, value proposition, etc.? How explicit?

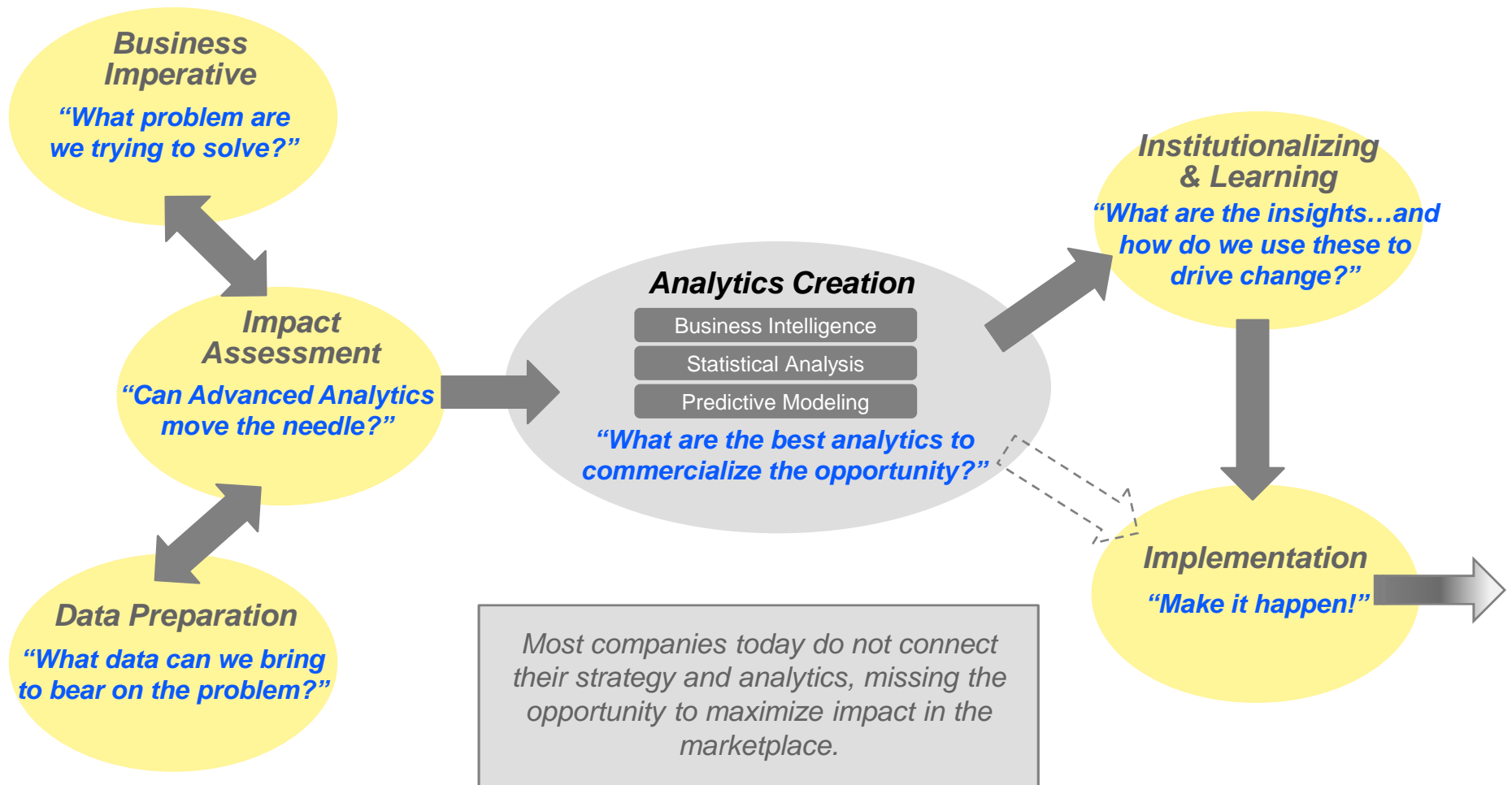
Question #2: Does the architecture / design have to be 100% decided up front or can the Exec team gain better focus and alignment over time? Trade offs?

Question #3: On the technical side, how critical to success is it to have a benchmark around the use of analytics / predictive modeling?

Feedback, Monitoring, and Communication

# Analytics impact is maximized by understanding the "Network Effect" that surrounds the modeling techniques

While analytics creation is at the center, a broader framework is required to maximize impact.



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## Polling Question #3:

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Development/Build Phase: who should be involved?

- Data Scientists/Actuaries
- Data Scientists/Actuaries and Underwriting Practice
- Data Scientists/Actuaries, Underwriting Practice, End Users
- Data Scientists/Actuaries and End Users
- None of above

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# Commercial Modernization proceeds through a sequence of stages with a strong feedback loop

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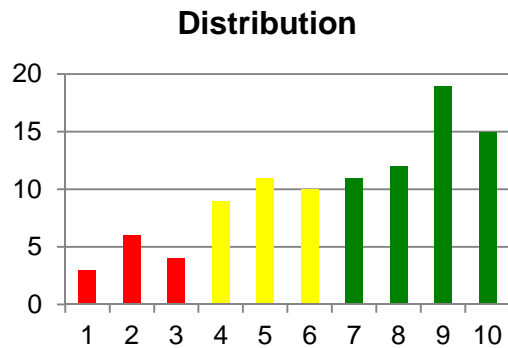
- Question #1: What were some unique challenges in merging the art and science of underwriting as you looked to re-platform the technology?
- Question #2: Tactically, what approach proved most effective in getting the underwriters / field personnel to engage in the development?
- Question #3: As insights develop how does one decide where to allocate the knowledge? Predictive model vs Rules engine vs Rates?

Feedback, Monitoring, and Communication

# Protocol Workshop: codifying underwriting knowledge through a deeper dive into portfolio distributions

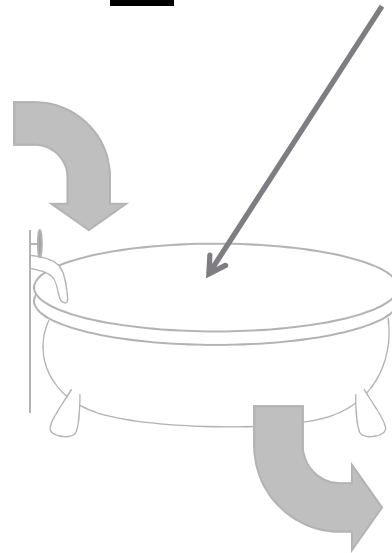
**1**

Measure the quality of flow into the portfolio through different sources. Compare and contrast with underwriter heuristics

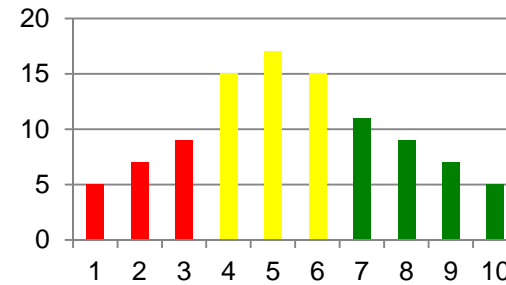


**2**

Measure the health of the portfolio and its various segments.



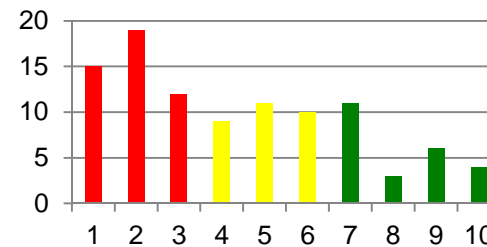
**Distribution**



Measure the quality of flow out of the portfolio through insured, agent, and insurer actions.

**3**

**Distribution**



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## Polling Question #4:

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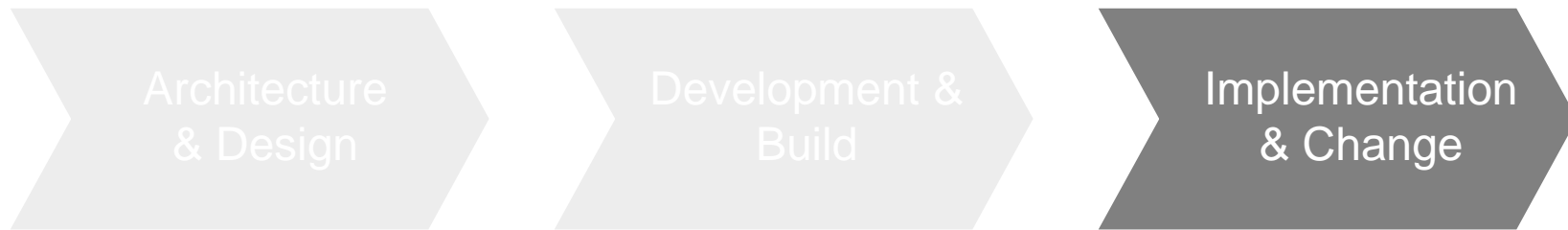
Implementation/Change: what would you do first?

- Pilot live on a subset of your business
- Map out where this fits in your end to end process; identify other steps that need to change
- Roll it out everywhere with fast follow monitoring and adjustment
- Test behind the scenes on existing business and past lost opportunities
- None of above

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## Small Commercial Modernization proceeds through a sequence of stages with a strong feedback loop

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Question #1: Insurers often struggle with experimentation. How critical was “test & learn” to the implementation success?

Question #2: How would you describe the shifts in skill sets and personnel required to drive the changes?

Question #3: In the context of culture change, describe the pay back from the early investments in vision and early participation by the field?

Feedback, Monitoring, and Communication

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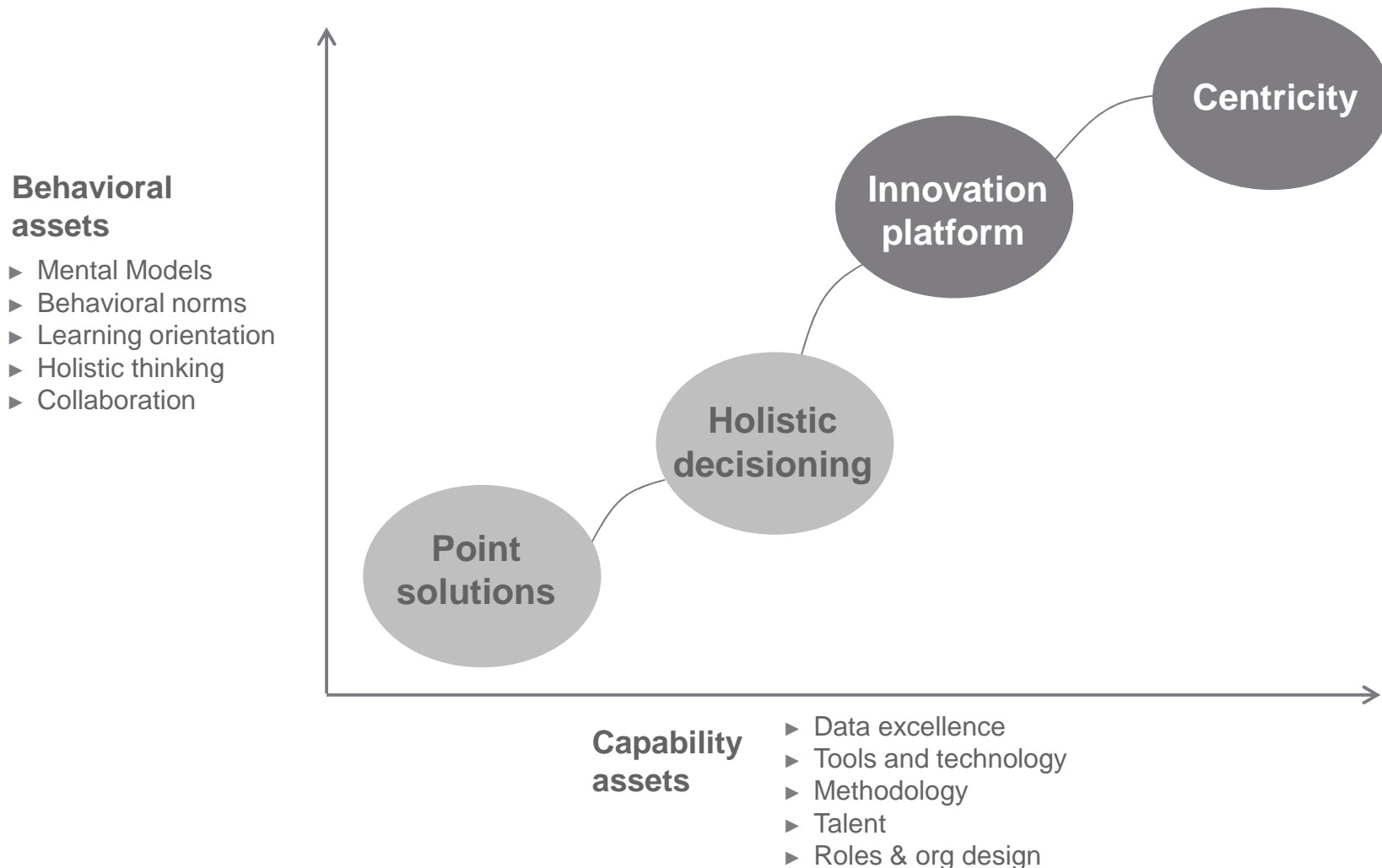
## Post Implementation Performance Metrics:

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- ▶ Profitability
  - ▶ Claim Frequency
  - ▶ Loss Ratio
- ▶ Operational performance
  - ▶ Reduced operational costs
- ▶ Growth
  - ▶ New Business Hit Ratio
  - ▶ Target market disruption
  - ▶ Success rate in high and low appetite areas



# Journey: successful transformation strategies involve explicit levels of investment along behavioral and capability dimensions



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## ***Questions & Answers***

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