PaymentsEd

Your source for payments education

Hypothesizing, Experimenting, Testing and Iterating in Payments

From Scary to Simple!

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Key Takeaways

Following this session, you will have the necessary tools to be able to determine:

- How to define an experiment.
- How to prioritize your experiments.
- How and when to measure the outcomes of experiments.
- Design an ongoing framework for measurement of successful outcomes.

What *is* Experimentation?

- Intentionally making a change via a controlled test
- Based on an informed, data-driven hypothesis
- Across one or more variables
- To improve a KPI and drive better performance

Experimentation can apply across **all aspects of your business** - but today, we'll focus on payments.

What is one experiment you've been afraid to try - and why?

What is Your Current State?

- What are your **baseline** metrics and dimensions?
  - Do you have the right instrumentation?
  - What would a **significant outcome** mean?

- What other factors may impact your experiment?
  - Time, seasonality…?

Measurement	Control	Testing Readiness
Business & Operational KPIs	Highly-segmented Personalization	Targeted A/B Test...
No Metrics Available	Requires Engineering	Not Ready
Business KPIs	Requires Engineering	Slow Testing
Business KPIs	Marketing Control	Pre-Post Testing
Business & Operational KPIs	Marketing Control	Pre-Post Testing
Business & Operational KPIs	Highly-segmented Personalization	Targeted A/B Test...
Business KPIs	Highly-segmented Personalization	Low-Power A/B T...
Business KPIs	A/B Testing	Low-Power A/B T...
TBD	TBD	TBD
Business & Operational KPIs	A/B Testing	Targeted A/B Test...
Business KPIs	Requires Engineering	Slow Testing

- Fragmentation and complexity across the payments industry can result in behaviors which don't always seem consistent.

- Are you willing and able to make the changes that could result from the test? Do you have support and buy-in from all the impacted parties?

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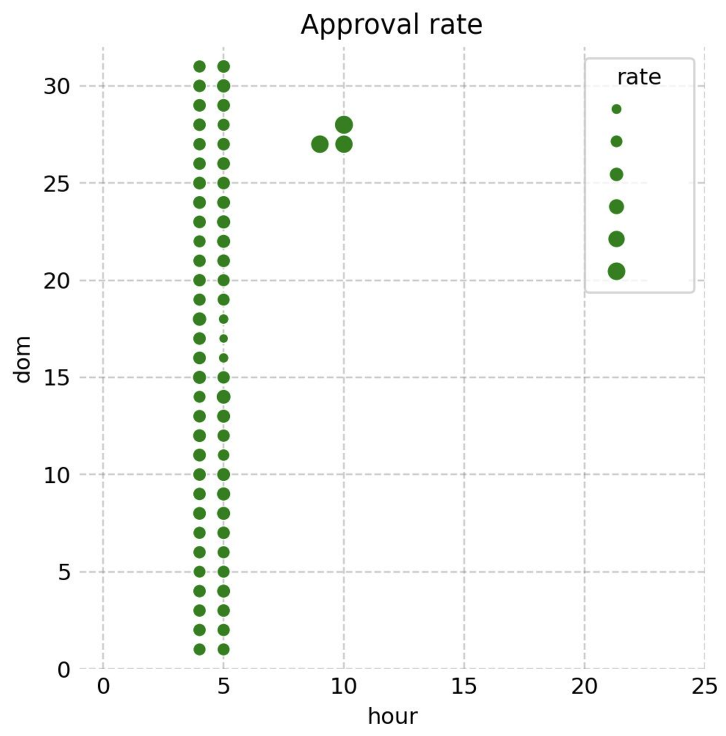
Use Data to Inform Your Hypothesis

- **Don't assume** outcomes: quantify patterns and anomalies.
- Use your own data, **but also** that from Networks, Issuers, and your community.
- **Balance revenue and risk** - ensure you are looking at all impacted dimensions - what levers can you pull?
- **Sometimes you need to zoom out** - measuring too small a subset of your data can lead to misleading results or aggressive conclusions (e.g BIN level analysis).



Creating an Actionable Hypothesis

Goal: Maximize learning with minimum effort

Bad Hypothesis: 'Let's improve approval rates'
- Does have a measurable outcome
- Not specific to a segment
- Not targeted to a specific lever

Good Hypothesis: 'At 7am, retry failed US Debit MITs to increase auth rate'

lever	segment	outcome

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Prioritizing Your Experiments Holistically

Use ICE to prioritize (multiply these rated on a 1-5 scale).

- **I**mpact - what is the expected benefit (relative)?
- **C**onfidence - how confident am I that we'll see the impact?
- **E**ase - how easy is it to implement?

	Impact	Confidence	Ease	ICE Score	
Experiment 1	4	4	3	48	Highest
	4	4	1	16	
	2	3	2	12	
	4	3	1	12	
	4	3	1	12	
n	3	3	1	9	Lowest

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Measuring Results

- Standard data measurement accounting for your strategy is “table stakes.”

- Monitor outcomes with data
  - If you can’t do an A/B test, do a pre/post test, but look out for mix shifts!
  - A/B tests are best: calculate the impact of each test directly, then roll up.

- Patterns can change over time, so keep a constant eye out for changes: they become new opportunities for testing.

- What does good look like? **Win rate of 10-33%.**
  - If you have a higher win rate, then your changes are not ‘big’ enough!

<u>In the words of Benjamin Franklin Gates:</u>

(referring to Thomas Edison)

Summary & Key Takeaways

1. Design smart experiments with clear hypotheses.
2. Leverage data at all stages of your experiment.
3. Be ready to pivot—learning is iterative and should be informed by results.

Thank you

- Don’t forget to submit your session evaluation!

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