

Modern Portfolio Management for Software Powered Companies:

Think like an investor, not an accountant

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Taking #NoEstimates to portfolio level

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A top-down view of a wooden desk. In the top left corner is a small potted succulent with green, fleshy leaves. Below it is a clipboard with a silver clip at the top. The clipboard holds a white sheet of paper with the text 'TO DO:' in bold, followed by three groups of horizontal lines, each preceded by a vertical column of five small yellow circles. A black pencil lies diagonally across the bottom right of the paper. To the left of the clipboard, the black frame of a pair of glasses is partially visible.

What is the task of Portfolio Management*?

(*) in a software powered business

Thinking in Bets

Making Smarter Decisions

When You Don't

Have All the Facts

Annie Duke



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graph TD; A["Making Smarter Decisions"] --> B["When You Don't"]; A --> C["Have All the Facts"]; B --> D[" "]; C --> D;
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Making Smarter Decisions

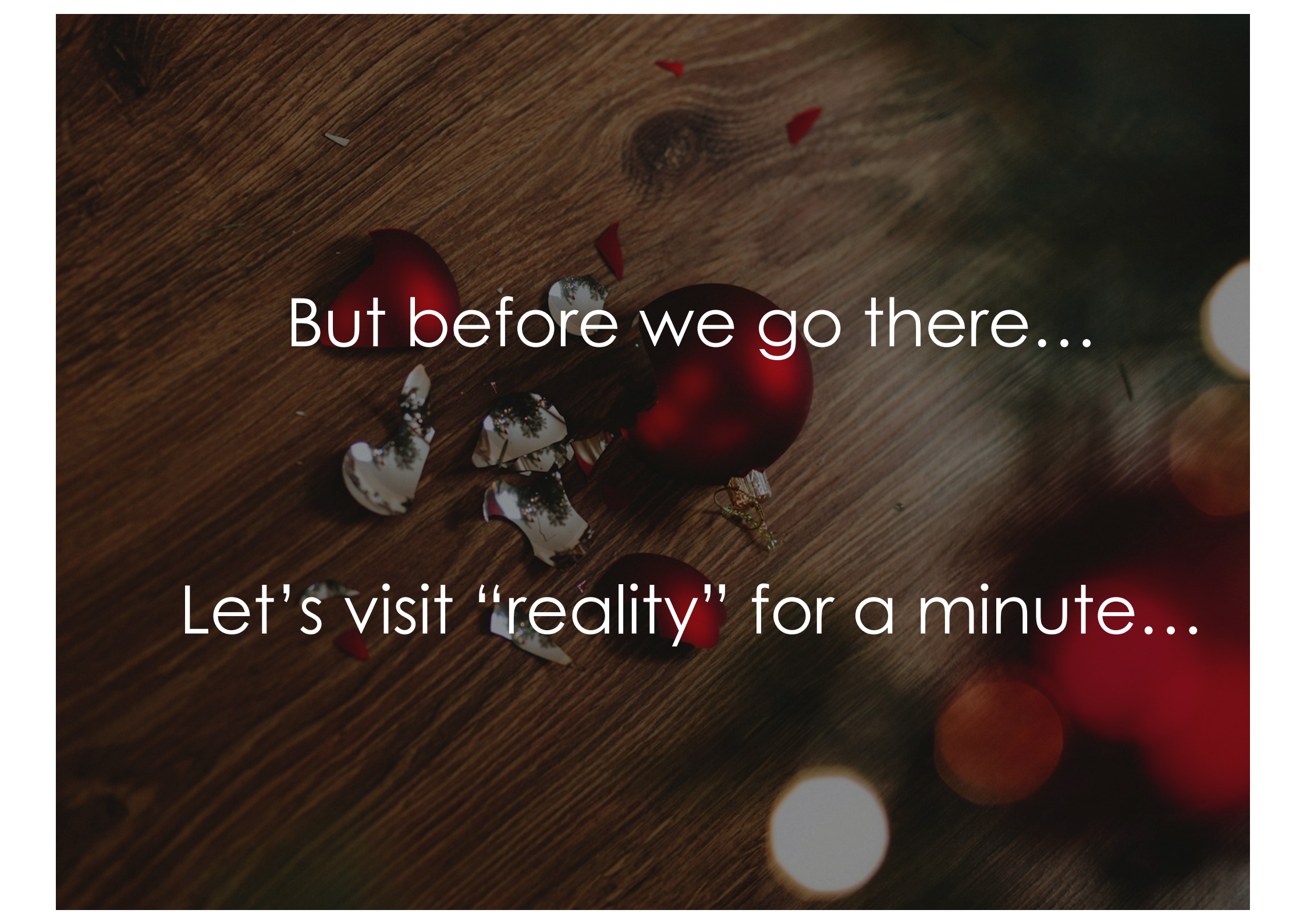
When You Don't

Have All the Facts



Keep this VISION in your mind...

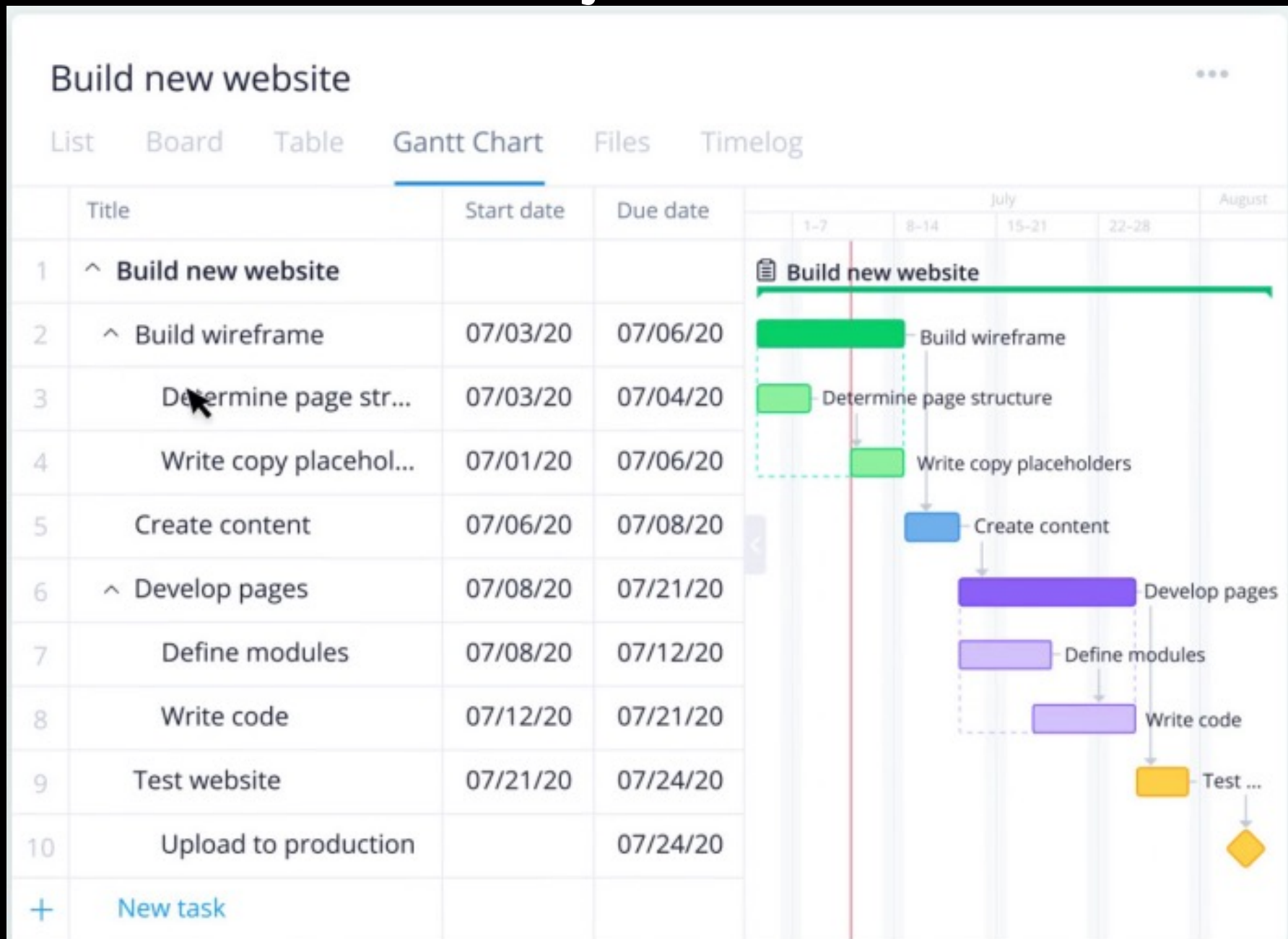
Imagine 10x'ing your company's profit or revenue through an Agile and AI-enhanced product development process.

A close-up photograph of a dark wooden surface. In the center, a red Christmas ornament is broken into several pieces. Some pieces are still attached to the main body, while others are scattered around. There are also several white, decorative, star-shaped or floral-shaped pieces scattered on the wood. In the background, there are out-of-focus bokeh lights in warm tones, suggesting a festive indoor setting.

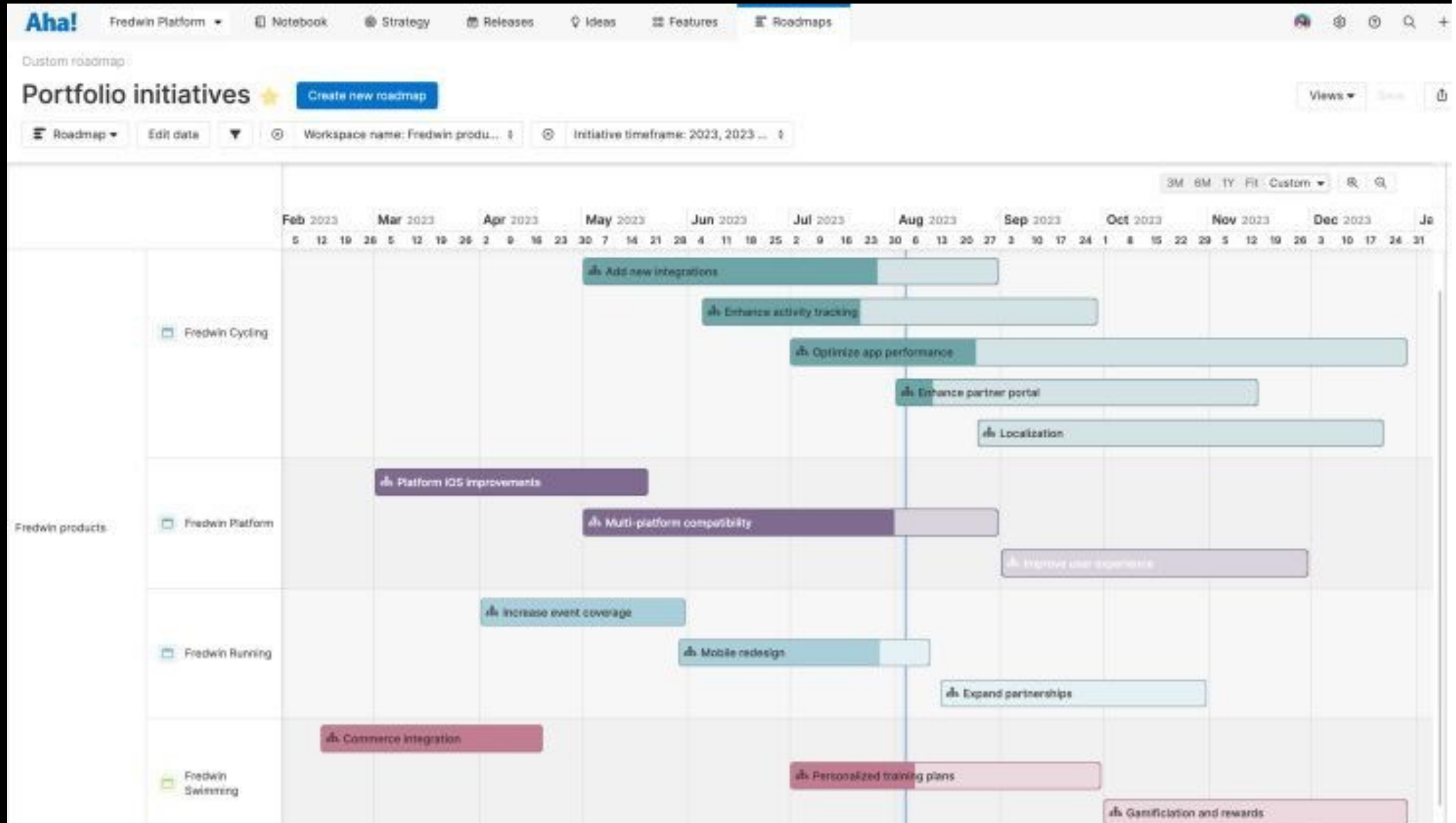
But before we go there...

Let's visit "reality" for a minute...

A Project Plan



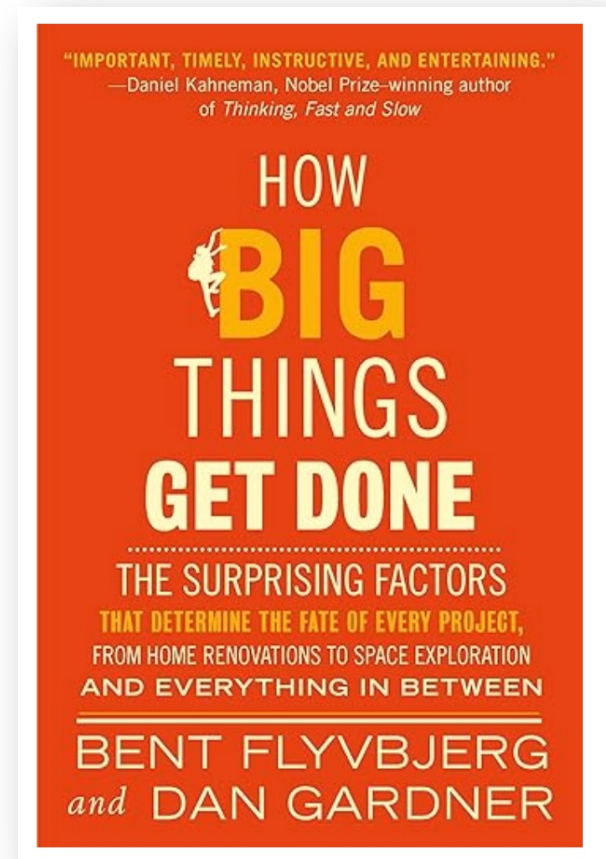
A Portfolio Plan



Dr. Bent Flyvbjerg's work shows us that...

99.5 percent of big projects fail in one way or another (time, budget, benefits)

Source: <https://www.quickbase.com/blog/why-big-projects-fail>.



Portfolio Management, Problem 1:

We are *managing* the future of our organizations, *like we managed projects* before 2001!

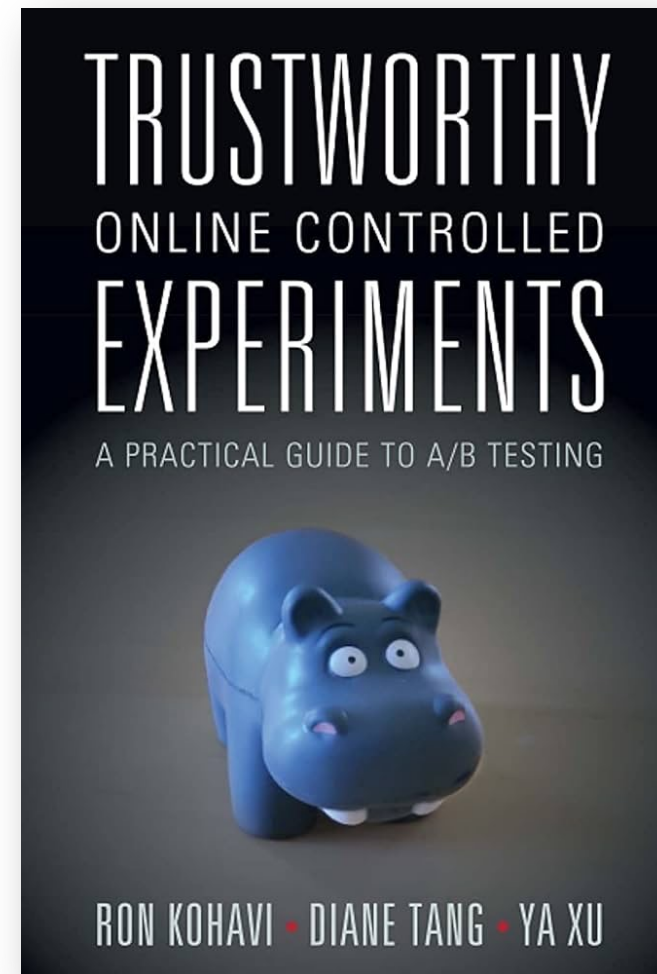
We need something different that focuses on outcomes and adaptability!

But it does not stop there!....



The stark reality of today

- Hit-or-miss outcomes: **Only 10-30% of changes/features add measurable value** (Ron Kohavi, Trustworthy Online Controlled Experiments)
- Incremental improvement expectations (5-10% annual) don't align with real ROI due to low success rates.
- The **'Red Queen Effect'**



Predictability vs. value

We keep saying and thinking “Project” because of the promise of predictability. But **predictable delivery is not the same as impact/value!**

Take away:

Agile Product Management must be about focusing on overall portfolio value or investment return, instead of maximizing project predictability, or on-time delivery.



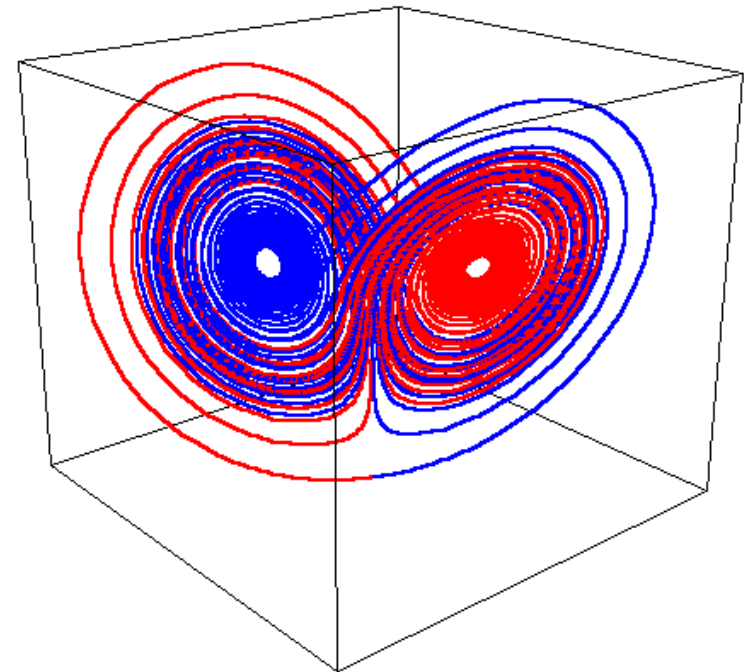
Portfolio Management, Problem 2:

*When we try to maximize
predictability,*

we lose sight of the more important
goal: *maximize value generated* from
the investment!

And then there is... Complexity

We only need 3 variables to observe complex behavior as Edward Lorenz showed with his Lorenz system



Take away:

Even small product portfolios have much more than 3 variables with non-linear links, and complex interactions. **Estimation is useless in that domain.**



Portfolio Management, Problem 3:

Plans are static. ***Portfolio management requires dynamic adaptation in near real-time.***

The 3 problems we need to solve at Portfolio level

The Problems

1. We need a method that focuses on outcomes and adaptability! (**Agile Product Management**)
2. We need an approach that tries to maximize value generated (**Experimentation**)
3. We need near real-time outcome simulation to provide insights that lead to adaptability (**AI-Powered Portfolio Simulation**, with near-real time scenario updates with data from experiments)





10k Feet solution: Agile + AI for 10x Results

- **Agile Product Management + AI** to Accelerate Value Discovery
- **Value Discovery** as the foundation of all product decisions.
- Implementing a **'kill criteria' for non-performing features.**
- **Experimentation and continuous learning** with customer feedback and data-driven iteration.
- **AI + Simulation** accelerates and amplifies experimentation capabilities, providing faster feedback and insights.



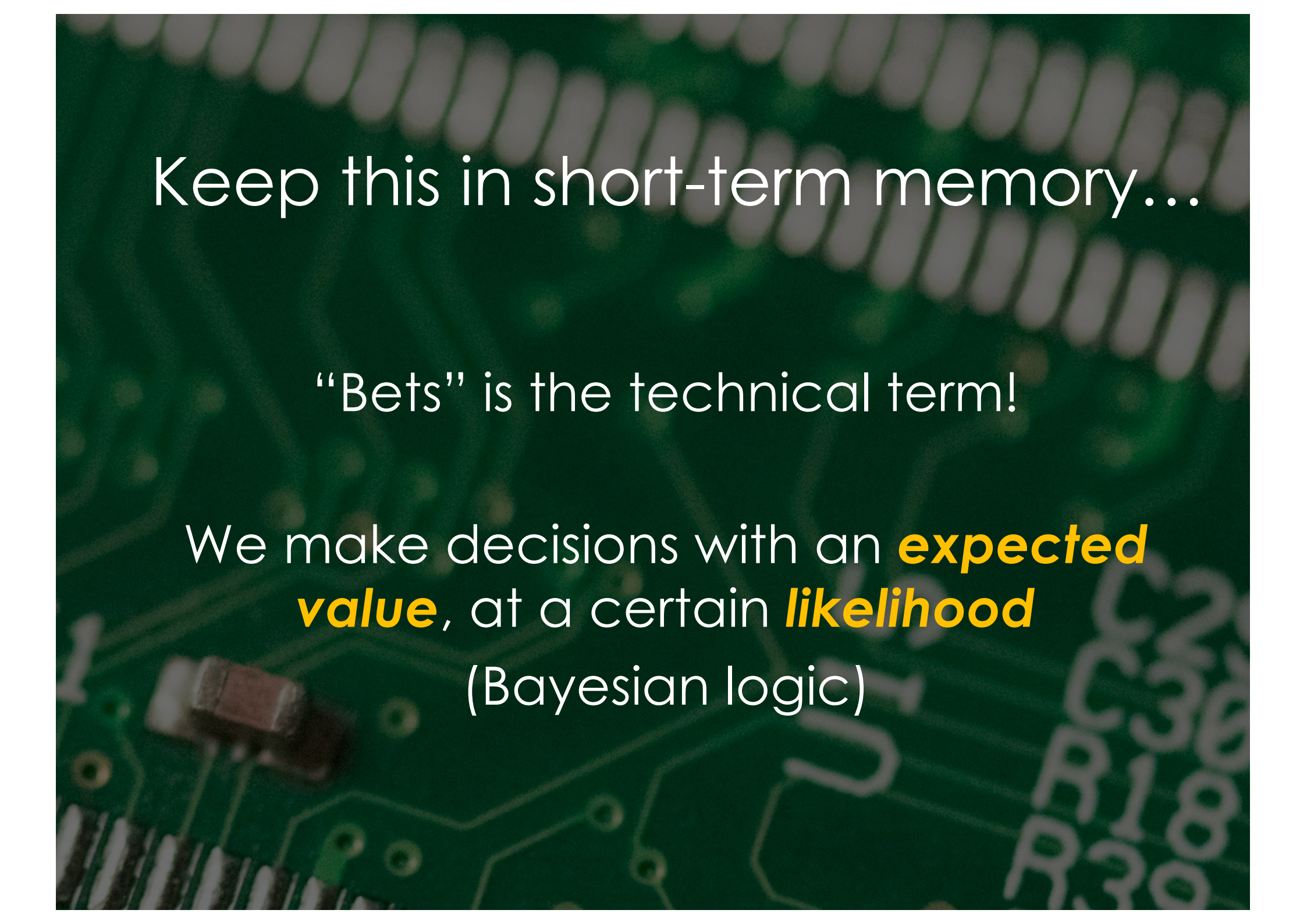


Rebecca Homkes, Author of *Survive, Reset Thrive*

"Successful teams don't just rely on facts—**they act on beliefs**. Use belief trackers to stay agile and learn faster."

Use a "**belief tracker**" to monitor and adapt strategies based on real-time learning and experimentation.





Keep this in short-term memory...

“Bets” is the technical term!

We make decisions with an **expected value**, at a certain **likelihood**
(Bayesian logic)

A method that focuses on
outcomes and **adaptability**

PROBLEM

Case Study #1 – From Idea to Revenue in 4 Weeks

- Real-Life Success: \$420K/Year Revenue in 4 Weeks
- Product Focus on **short feedback loops** and **value-driven criteria**
- **Out** increase demand through focused development.



Fabian practicing his precision shooting

An approach that tries to
maximize value generated
Not WORK DONE!

PROBLEM 2

Is 10x growth really possible?

- 2 weeks experiment
- Validated core assumption
- Went from 300K/year revenue (~842 Eur / Day)
- To 5M/Year in 698 Eur / Day)
- Kept tweaking it and found other growth opportunities

**16X GROWTH, MOSTLY
DELIVERED IN UNDER 3
MONTHS**

The screenshot shows a window titled "and services that start while it boots." with a "New Status" button. It contains a table with four rows, each with a "During boot" label and a dropdown menu. The dropdowns are set to "After boot", "During boot", "After boot", and "After boot" respectively. Below the table, it says "Recommendations are highlighted green" and has "Cancel" and "Next" buttons.

	New Status
During boot	After boot
During boot	During boot
During boot	After boot
During boot	After boot

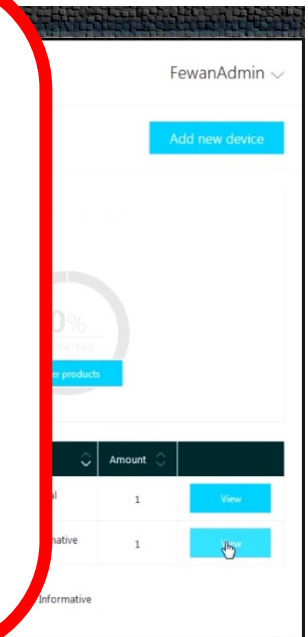
Recommendations are highlighted green

Cancel Next

Experimenting before you have customers

- 1,5 years
- Monthly customers
- Many ideas sales are with customers
- From 0 to 10M revenue in 5 years

To find growth we must test many ideas with real paying customers. Micro-experiments are a key aspect of Agile Product Management



Portfolio Management's goal

Takeaway:

The Goal of Portfolio Management is value creation, not project execution follow-up!

Which leads to ...



Near real-time *outcome simulation*
to *provide insights that lead to*
adaptability

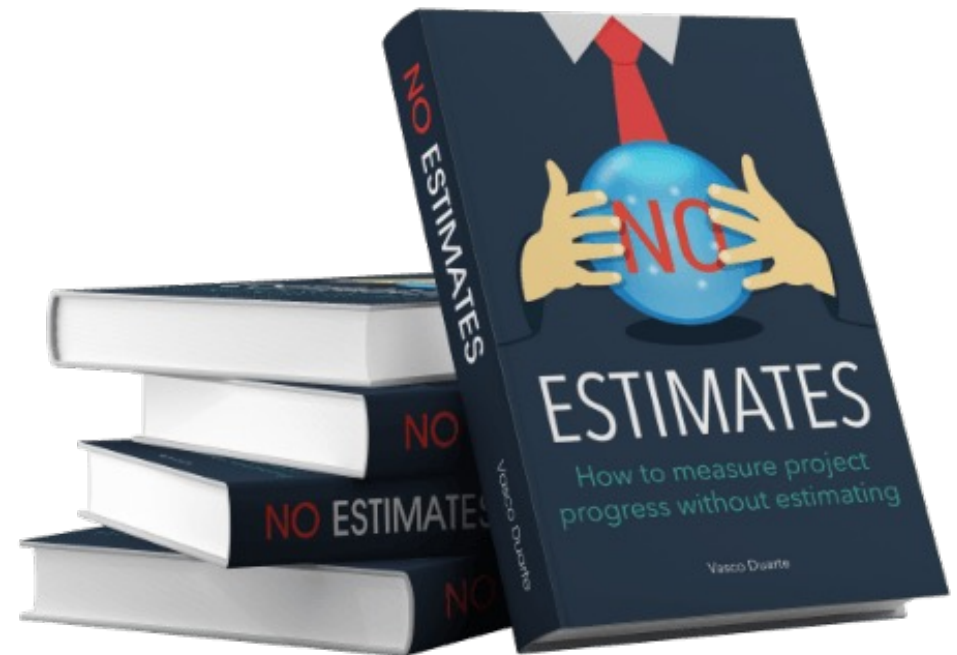
PROBLEM 3

Estimation does not work for Portfolio planning either...

Simulate the results of **bets** over time, with near-real time information from experiments and other data sources!

Take away:

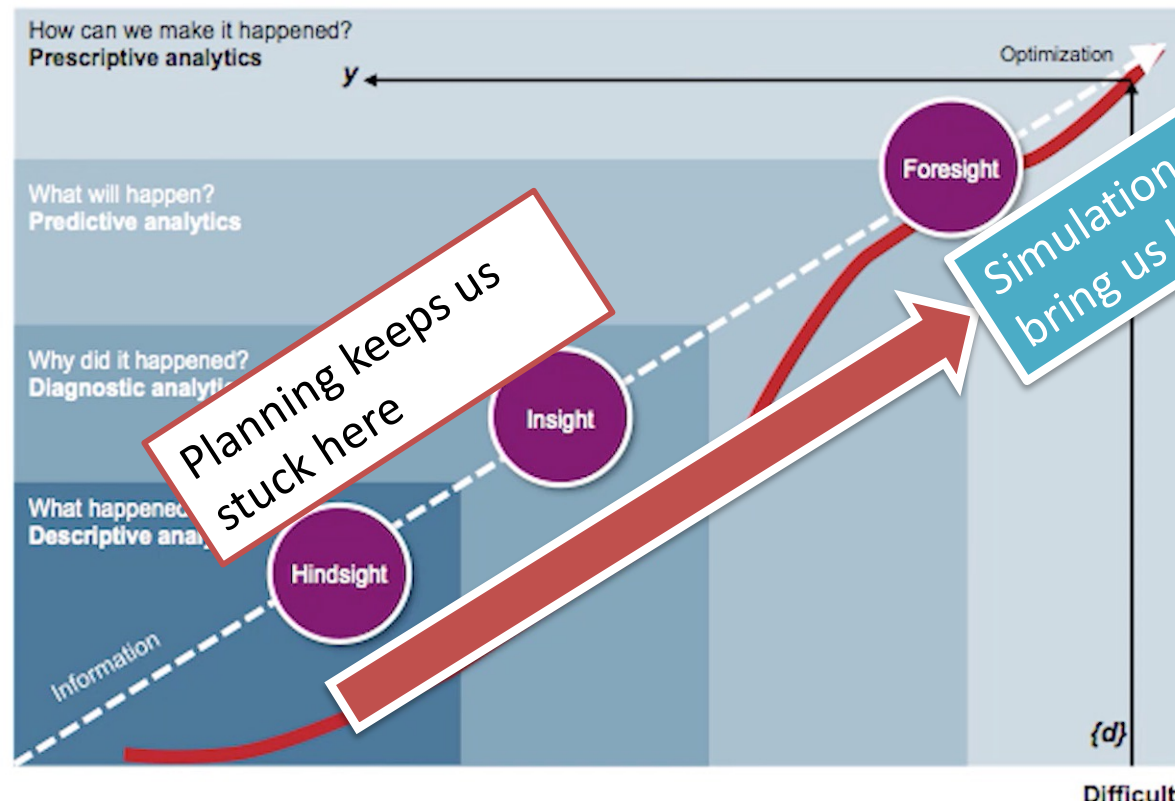
Simulating Portfolio execution helps **take into account decisions that affect projects, as well as value creation**



From "hindsight" to "foresight"

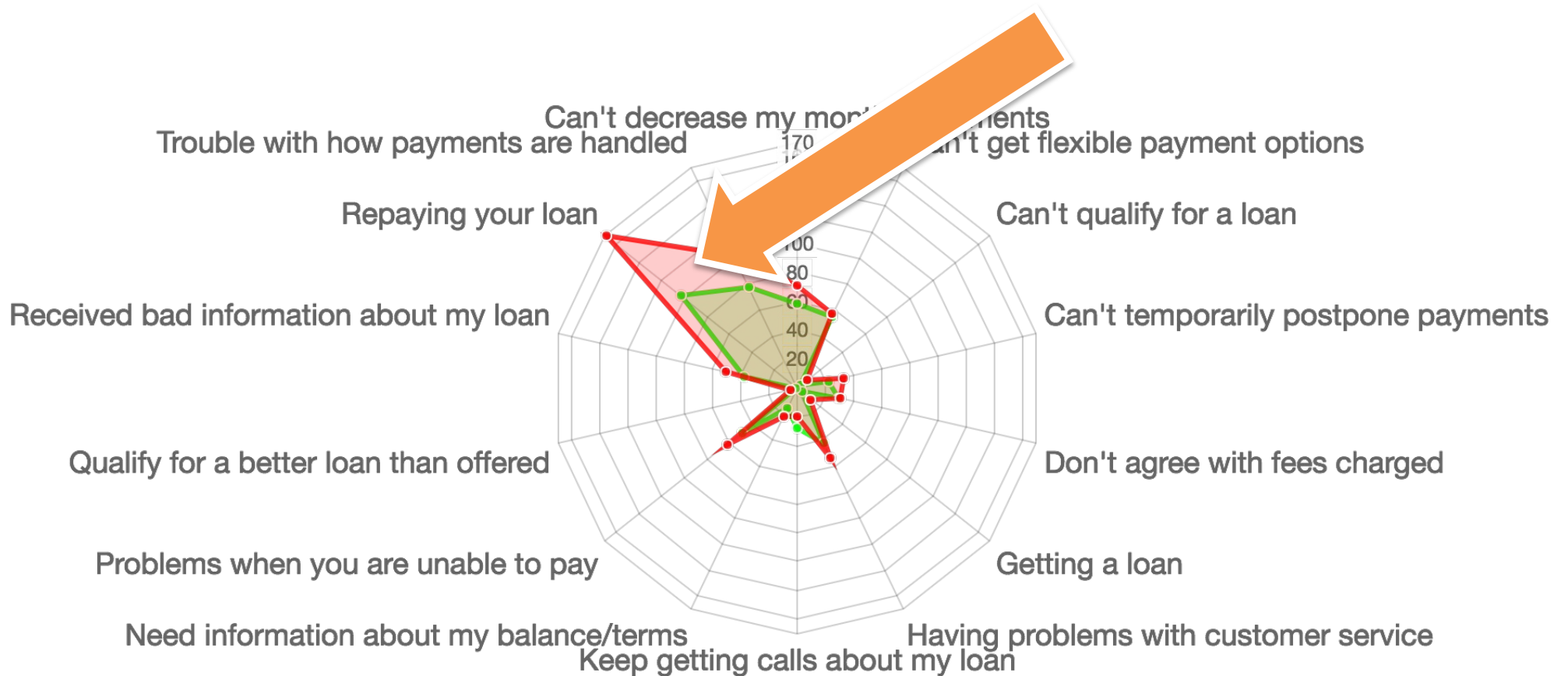
MEASURING THE DIFFICULTY AND VALUE OF ANALYTICS

Value



Interaction with Financial Services: Student Loans complaints

obs-1 sim-1

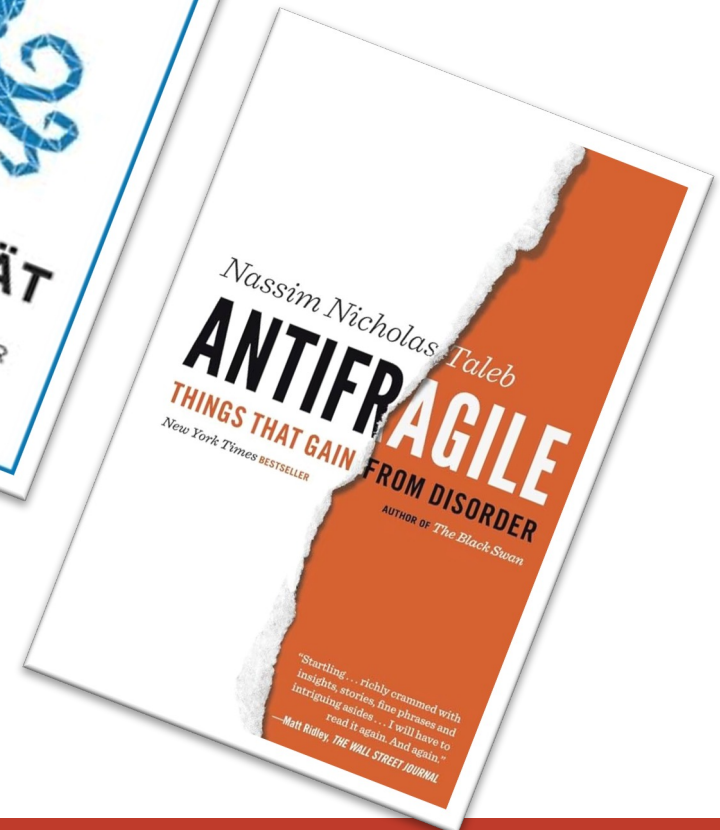


How it all works

We already know what builds resilience...

... and it does not look,
feel or even sound like
“**project
management**”

We must look at
software portfolios as
sets of bets, **like
investors** look at their
own portfolios!

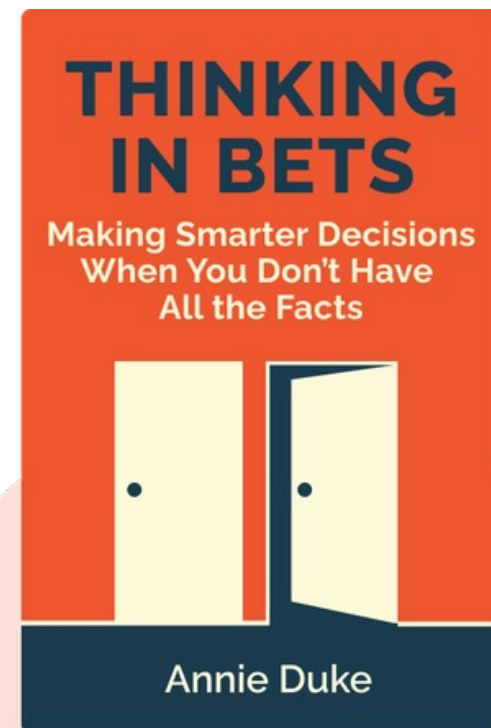


Use “Bets” To Make Decisions Under Uncertainty

By **framing decisions as bets** and continuously updating them based on new information, organizations can navigate the complexities of multiple-project portfolios and **use near real-time information to manage and reduce risk**.

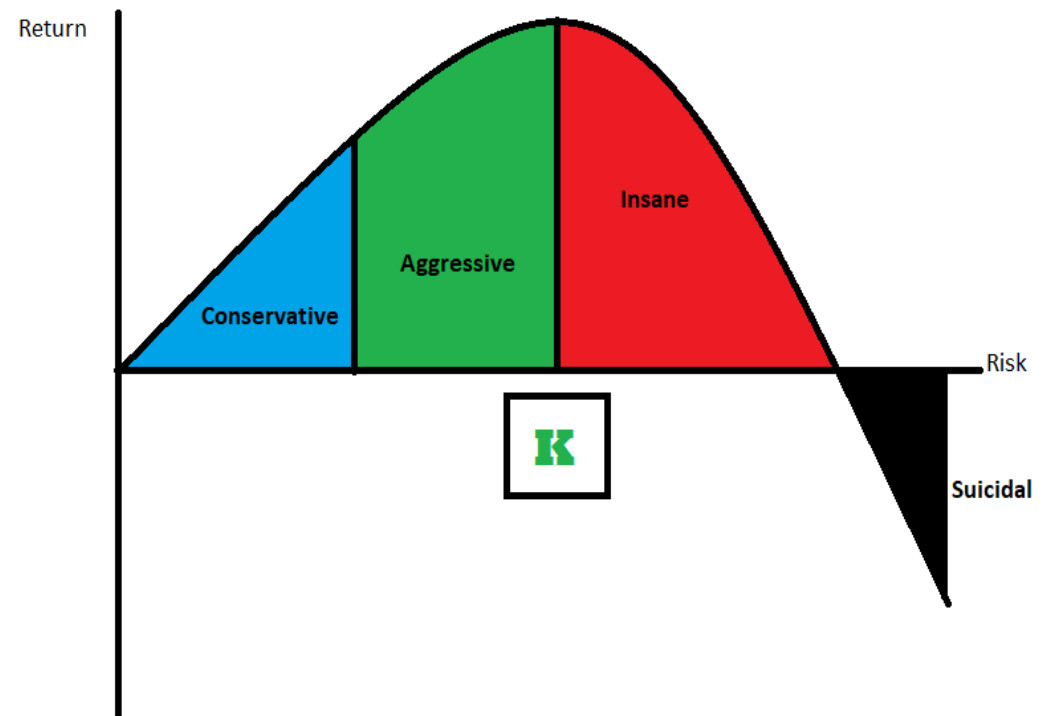
Technique: Duke's concept of "Bets" involves making decisions under uncertainty.

Reference: Thinking in Bets by Annie Duke



Use investment strategies that avoid “ruin”...

The **Kelly Criterion** is a strategy to determine the optimal proportion of your portfolio to allocate to each investment option



Kelly Criterion Example...

Suppose you have two investment options:

- **Investment A** has a 60% chance of doubling your investment but also a 40% chance of losing it.
- **Investment B** is more conservative, with a 75% chance of a 10% gain and a 25% chance of a 10% loss.

The Kelly Criterion helps you **calculate how much of your total investment funds** you should put into each of these options **to maximize your portfolio growth while controlling risk.**



But Most Importantly:

Build in ***feedback and adaptation
cycles*** to your Portfolio
Management process!

AGILE PORTFOLIO

Introducing AI as an Amplifier

- **Traditional product experimentation is slow** and time+people-intensive.
- With AI and Bayesian-based simulations, **multiple scenarios can be tested in minutes**
- AI + Bayesian simulation enables **rapid hypothesis testing and value discovery, exponentially expanding potential insights.**



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But, Vasco...

- **'Will it work for my product?'** – Our process adapts to any product where customer insight and agility are critical. (The key step is to create/build the feedback/data collection into the process – to feed the simulation)
- **'10x growth is unrealistic.'** – With our approach, 10x becomes a calculated target achieved through disciplined, data-driven experimentation and customer-driven insights. After all, I've just shared several case studies where we achieved it.



If you aim for 10x, and fail, you might only
get 2x!!!!

But you will get promoted anyway!



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More code really isn't the solution...



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Over 25% of Google's code is now written by AI—and CEO Sundar Pichai says it's just the start

BY GREG MCKENNA

October 30, 2024 at 5:14 PM GMT+2



Alphabet CEO Sundar Pichai.

JEENAH MOON—BLOOMBERG/GETTY IMAGES



Bring this expertise and tools to your team!

- **AI will “eat our lunch”** if we continue to focus on more code as the solution
- We can host workshops with you.
- You have to come and ***talk to me right after this session to bring this workshop to your team***





The key question for you is...

Are you ready to 10x Your Product
Development?



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Because if you don't...

5%/10% is still ok for about 6-12 months.
But with the advent of AI, it's unlikely to
be more than that.

***Talk to me right after this session to bring
this workshop to your team***

