

**DaVinci**  
CONSULTING

# ENGINEEROVATION™

Jobs-to-be-Done Innovation + Lean Six Sigma Engineering

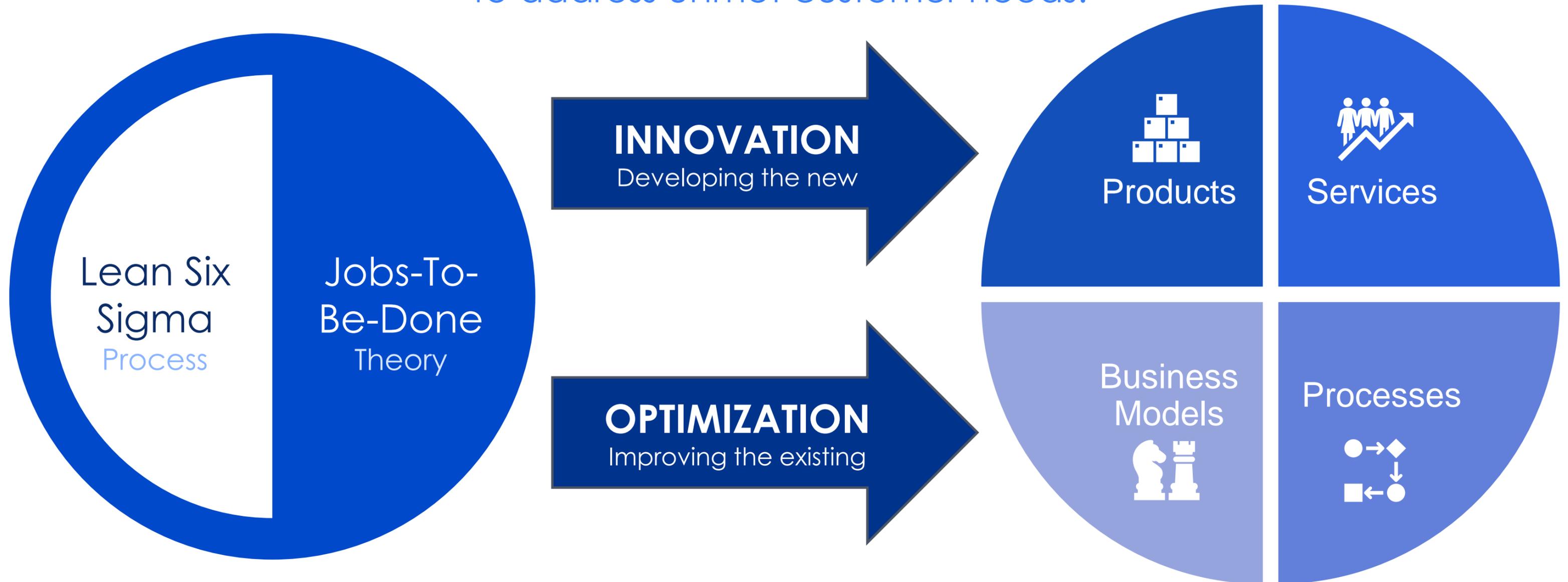
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# ENGINEEROVATION™

A needs-driven, science-based methodology to optimize the development or improvement of products, processes, services and business models to address unmet customer needs.



# INNOVATION AS A SCIENCE

“From production and marketing to finance, human capital management and even strategy, we have broken down most every business function into a **data-driven, repeatable, predictable process**. And yet, in most organizations, **innovation** remains largely a **blindfolded dart game**. We invest large amounts of money, hope for the best, and often end up **disappointed with the results**.

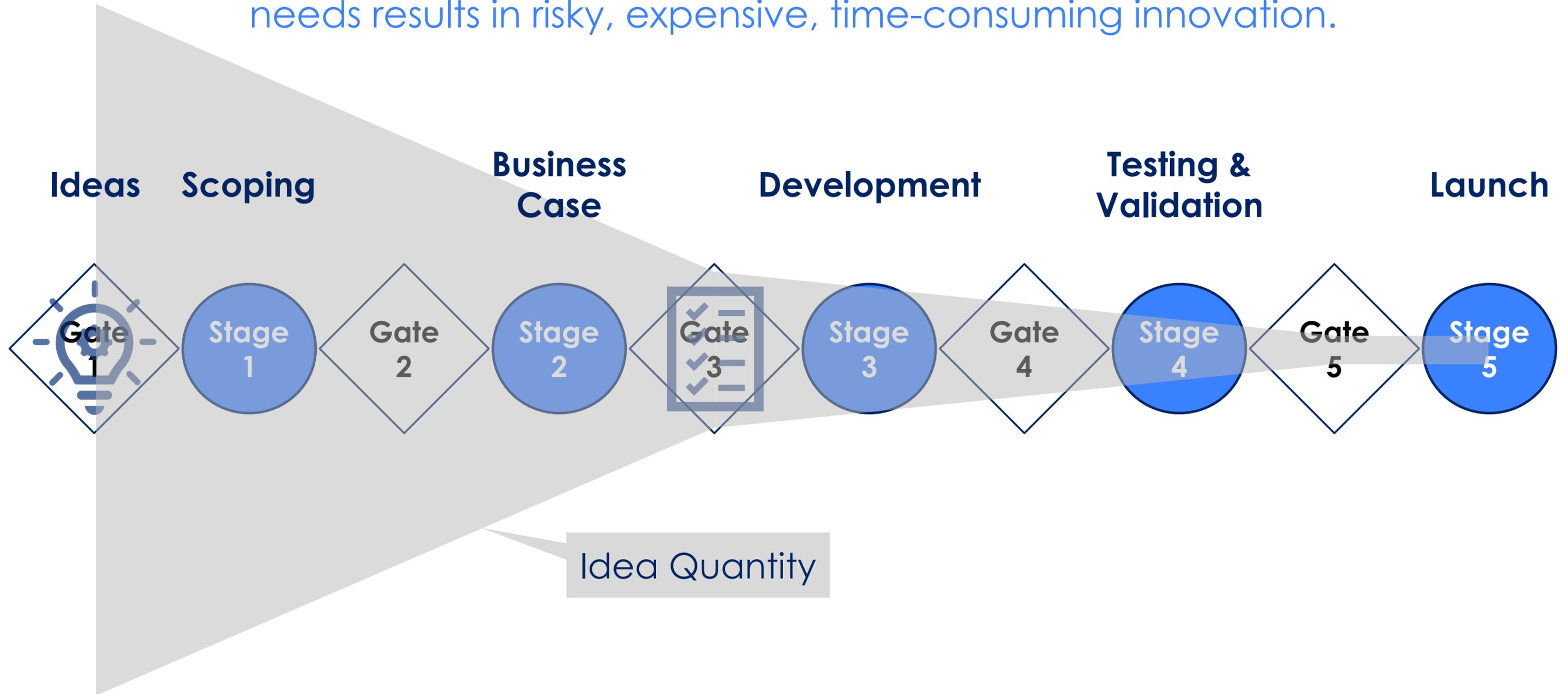
**It's time the innovation process became a SCIENCE.”**

- Daniel Small, CEO, Da Vinci Consulting



# TRADITIONAL INNOVATION

Starting with idea generation or R&D based on poorly-defined or undefined customer needs results in risky, expensive, time-consuming innovation.



# TRADITIONAL INNOVATION CAN RESULT IN...

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**Ill-conceived  
growth strategies**

**Faulty data  
collection**

**Missed  
opportunities**

**Poor market  
segmentation**

**Wrong growth  
targets**

**Unfocused  
marketing,  
messaging &  
branding**

**Poorly prioritized  
development  
initiatives**

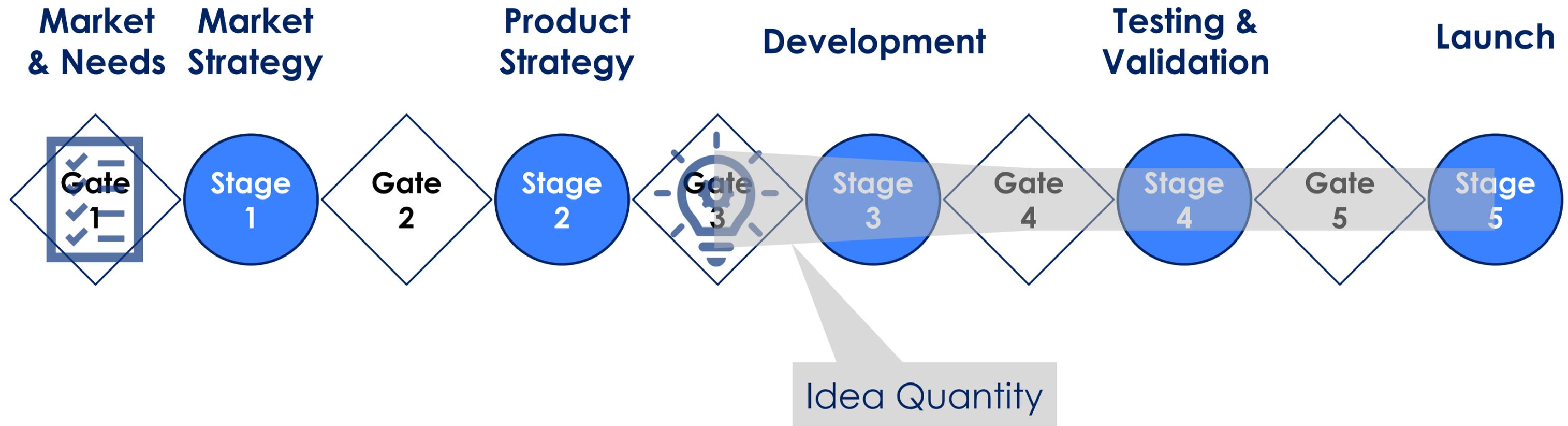
**Scattershot idea  
generation**

**Very low success  
rates**



# ENGINEEROVATION™

Starting with properly defined, job-focused, data-driven customer needs research guides ideation to “the likely few” winning ideas, reducing risk, cost and time to market.



# ENGINEEROVATION™ ENABLES YOU TO...

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Predict which ideas and products will win in the marketplace

Reduce time to market by eliminating the need to “fail fast” and pivot

Make the right design trade-off decisions every time

Reduce the risk of innovating by validating opportunities before pursuit

Align the work of your R&D and Marketing functions

Eliminate the need for repetitive VOC research

Increase your innovation success rate to over 80%

Decrease the cost of innovation by short-circuiting the development process



# CHANGE YOUR INNOVATION PERSPECTIVE

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“People don’t want a quarter inch drill; they want a quarter inch hole.”

—Theodore Levitt

Customers don’t care about your product or service; they care about getting the underlying job done.

Innovators need to become experts in the customer’s job.



# THE JOBS-TO-BE-DONE (JTBD) PERSPECTIVE

JOB-TO-BE-DONE theory is an innovation “lens” based on four basic principles:

- 01** People buy products and services to help them get a job done
- 02** The “job” - NOT the solution - is the unit of analysis
- 03** A “job” is stable over time, making it a constant in the equation
- 04** The customer is the **ONLY** expert on the job



# SCIENCE MAKES INNOVATION PREDICTABLE

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Value creation becomes more predictable when you you've defined and quantified the customer's unmet needs and are able to assess how much better competing solutions will help the customer get the "job" done.



# THE ENGINEEROVATION™ PROCESS



<b>INNOVATION</b>	Define the “Job Performer,” the “Job-To-Be-Done,” the market and the customer needs	Quantitatively identify and evaluate the underserved and overserved customer needs tied to the Job-To-Be-Done	Use statistical analysis to discover and prioritize the resultant innovation opportunities associated with the quantified customer needs	Optimize marketing language around current on-target solutions; update pipeline priorities; and develop/improve solutions to better meet customer needs	Test the new solution with Job Performers to measure its improved effectiveness in meeting customer needs
<b>OPTIMIZATION</b>	Identify the problem, define project requirements, set goals for success	Use data to validate assumptions about the process and the problem	Develop hypotheses about causal relationships between inputs and outputs, narrow causation down to the vital few, and use statistical analysis and data to validate hypotheses	Start developing ideas, use statistics and real-world observation to test solutions, and begin to implement and standardize them	Tie up loose ends, transition the new process to a daily work environment, and establish controls and standards to maintain improvements



# DEFINE THE MARKET AROUND THE JOB-TO-BE-DONE

Solution-based “markets” disappear as technologies change.

The job remains stable over time, making it the ideal market focus for consistent innovation.

Augers



Hand Braces



Cordless Drills



Robotic Drills



← **Make a Hole** →

DEFINE

MEASURE

ANALYZE

DESIGN

VERIFY

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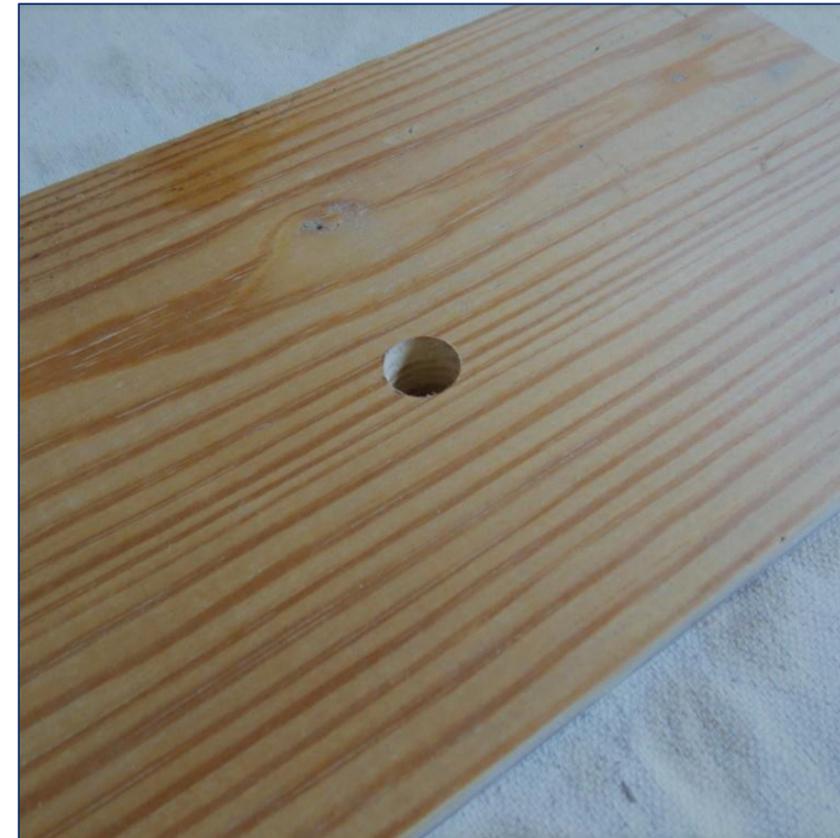


# MARKET = “JOB PERFORMER” + “JOB-TO-BE-DONE”

Defining a market as a job performer with a functional job-to-be-done provides a new avenue for market analysis.



Construction workers



Make a hole in sheet goods

DEFINE

MEASURE

ANALYZE

DESIGN

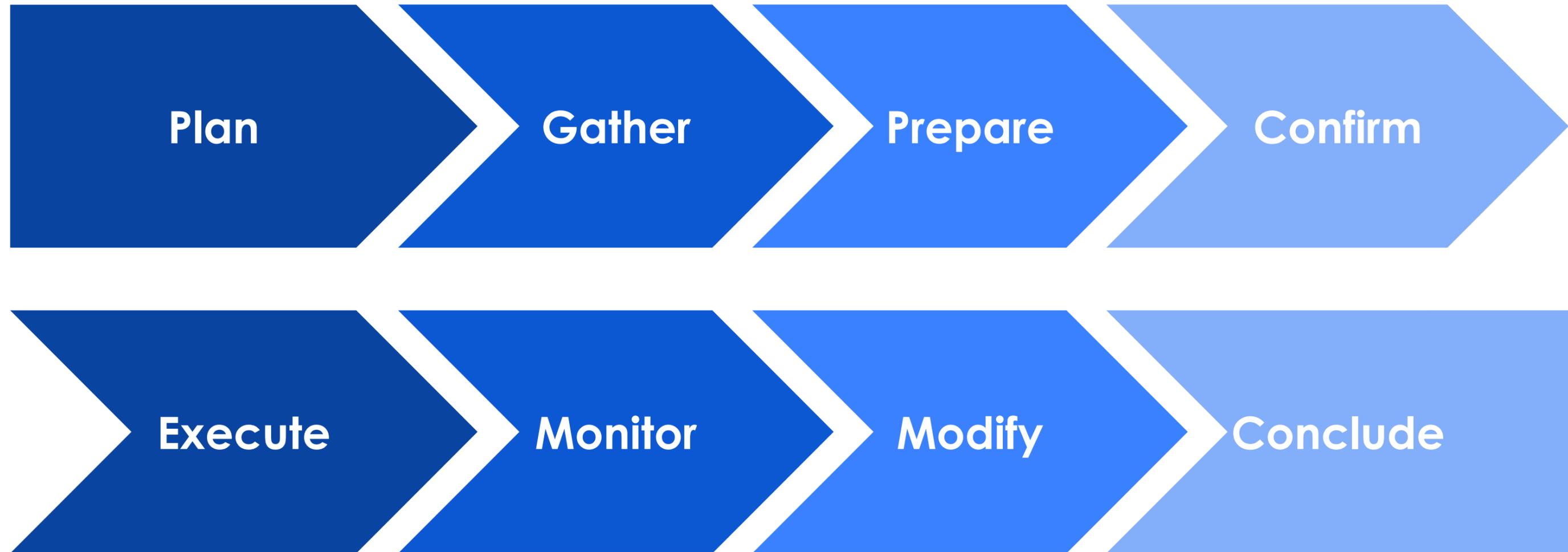
VERIFY



# THE JOB MAP IS USED TO ANALYZE THE JOB-TO-BE-DONE

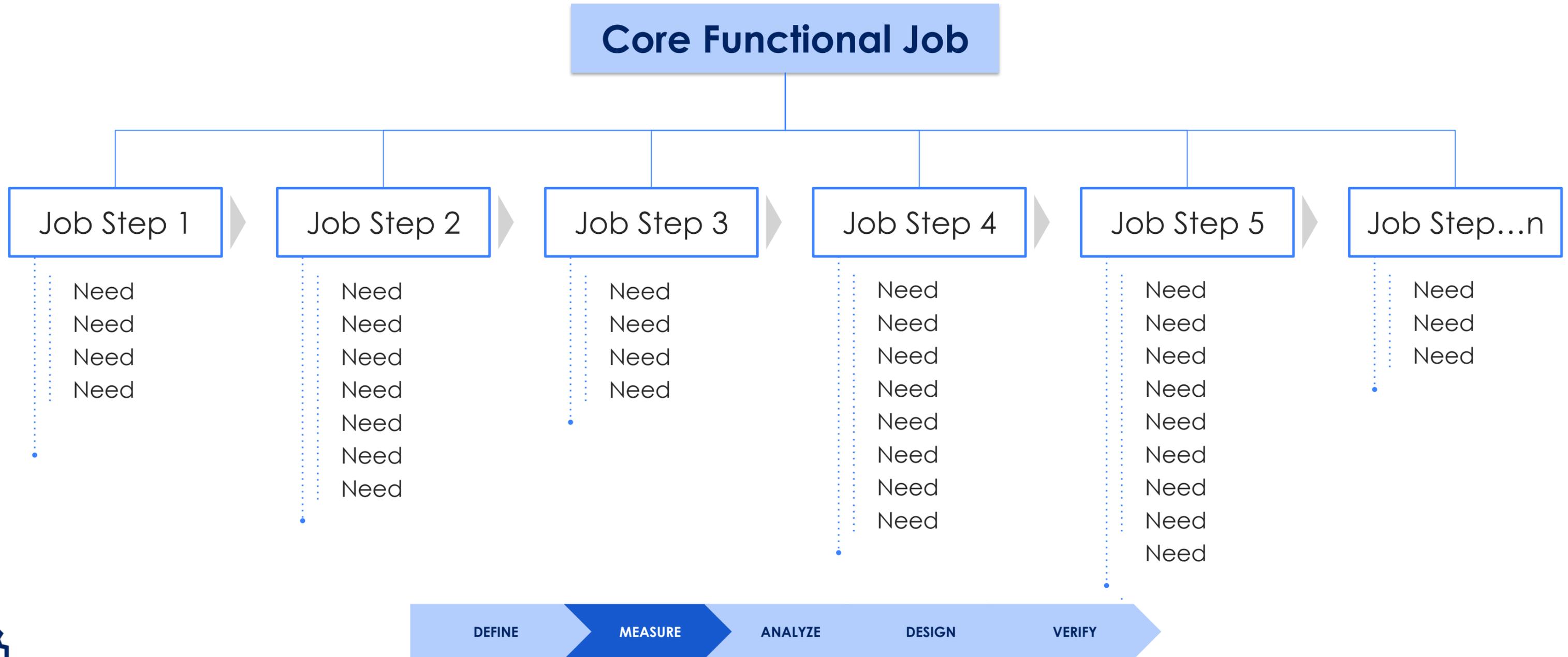
A Job Map details, step by step, what the customer is trying to get done—  
not what they are doing.

A Job Map is solution-agnostic and applies across geographies.



# JOB, JOB STEP, NEED HIERARCHY

Once the job-to-be-done is defined, we create the job map and collect needs within each step of the job.



# THE WAY NEEDS ARE STATED MATTERS

The perfect “need” statement is:

Tied to the Job-  
To-Be-Done

Solution-agnostic

Stable over time

The customer's  
metric for success  
(NOT the  
provider's)

Unambiguous

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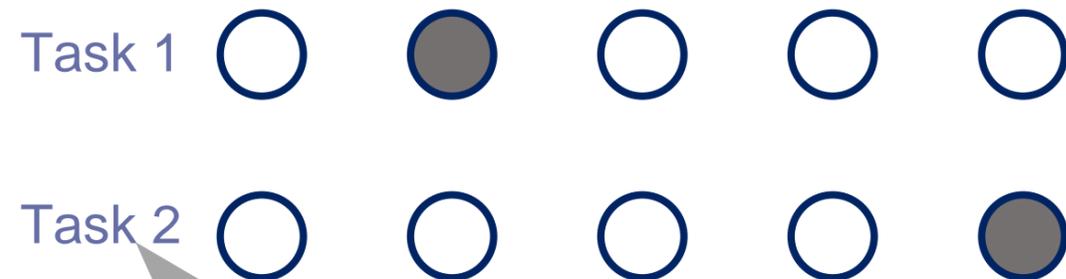
# JOBS-BASED RESEARCH REVEALS UNMET NEEDS

Statistically valid quantitative research reveals hidden segments, competitive strengths, unmet needs and more.

When trying to **prepare to make the hole...**

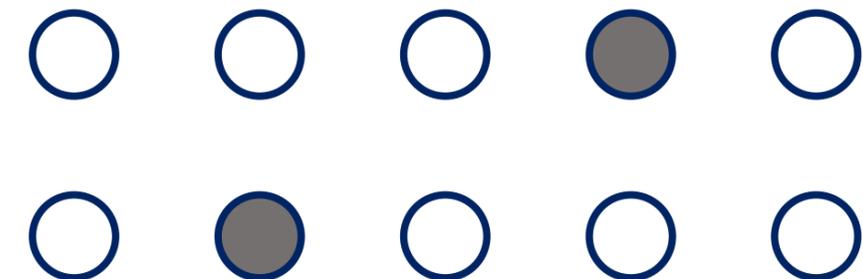
...how **important** is it to you that you are able to...

Not at all important   Somewhat important   Important   Very important   Extremely important



...how **satisfied** are you with your ability to...

Not at all satisfied   Somewhat satisfied   Satisfied   Very satisfied   Extremely satisfied



E.g., Minimize the time it takes to confirm the desired size of the hole

DEFINE

MEASURE

ANALYZE

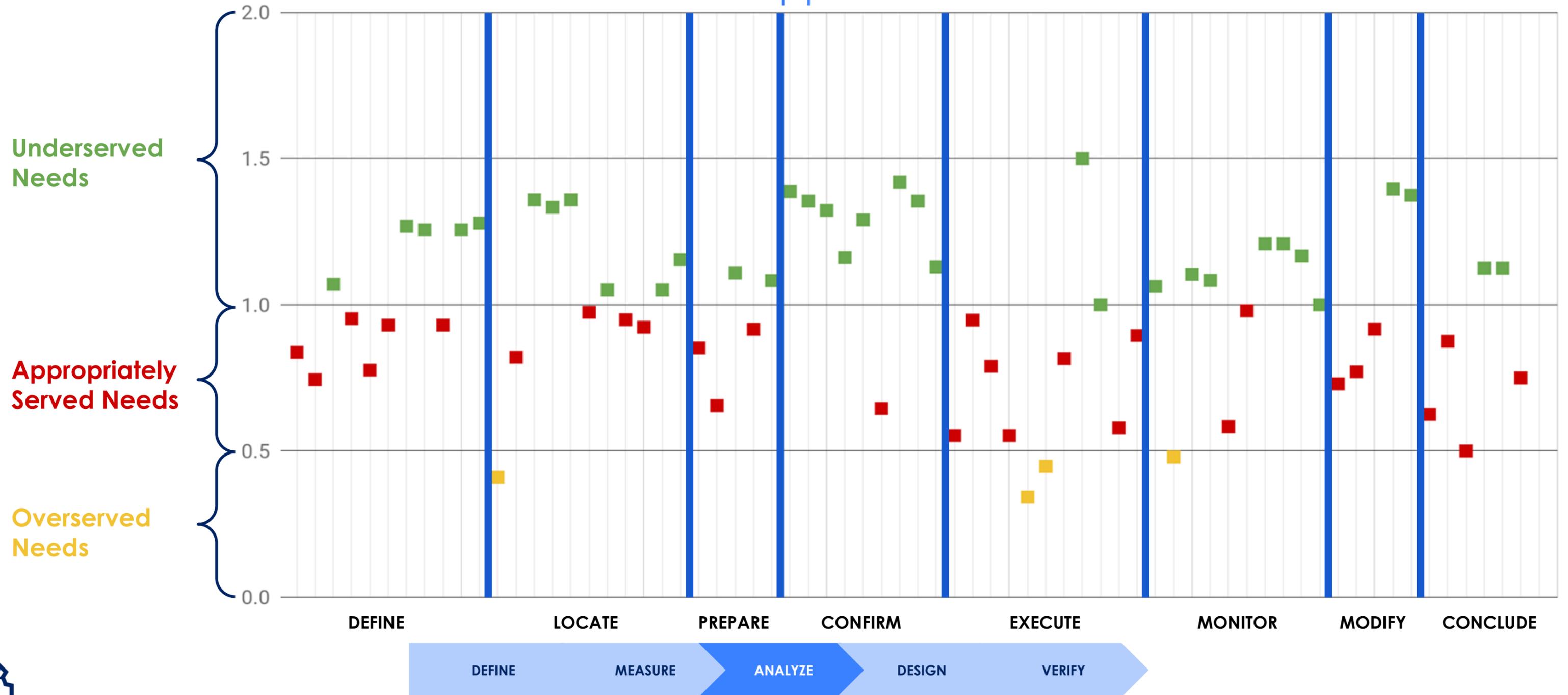
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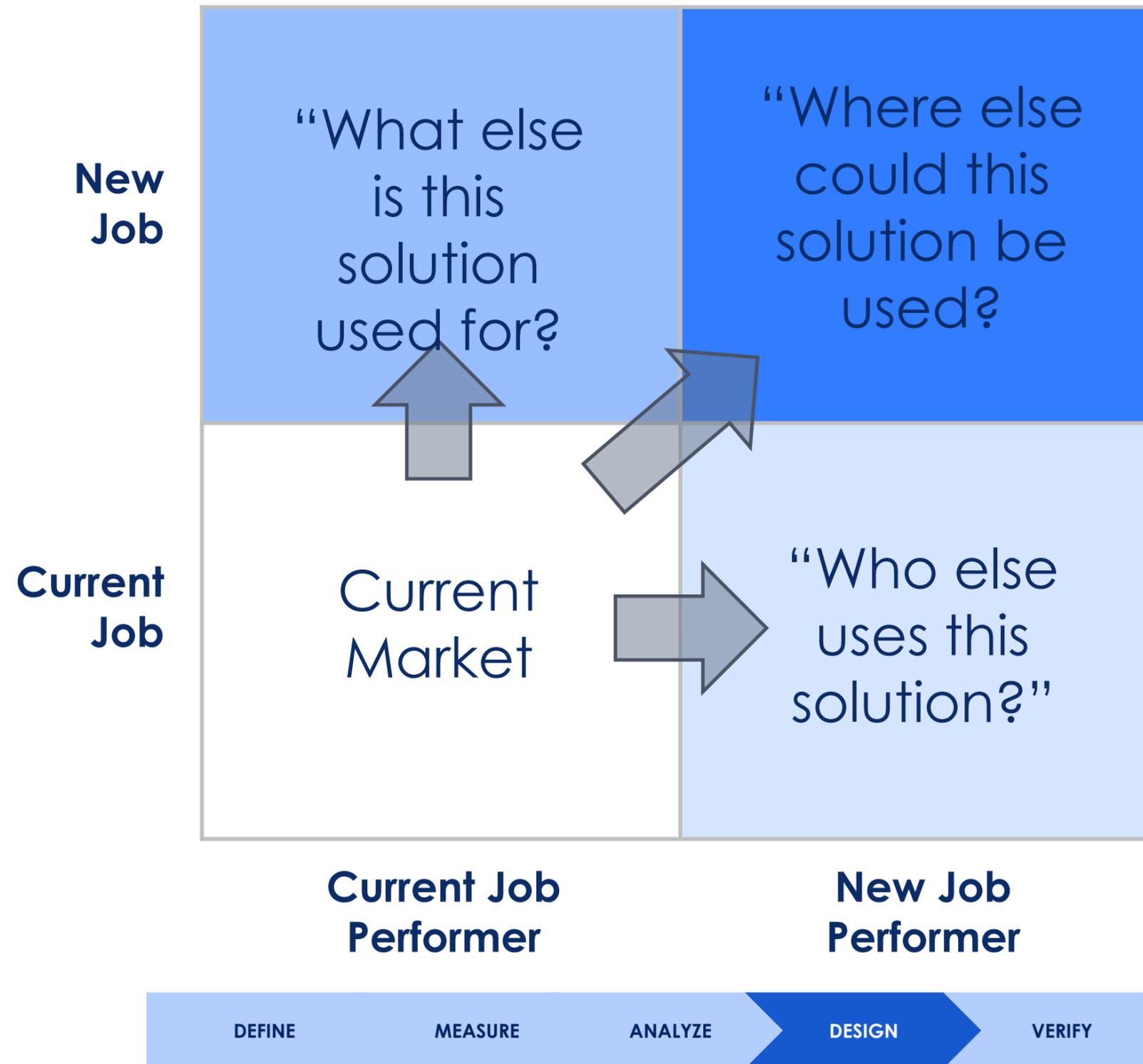


# THE OPPORTUNITY MAP

Statistical analysis quantifies under- and over-served customer needs, revealing innovation opportunities.



# THE DATA MODEL INFORMS GROWTH STRATEGY



# VALUE CREATION PRIORITY

The data informs the entire innovation pipeline.



# TRADITIONAL BRAINSTORMING VS. FOCUSED IDEATION

## TRADITIONAL BRAINSTORMING

- Wasteful, deceptive and risky
- Generates a lot of largely unsubstantiated ideas
- Causes confusion and requires time and money to evaluate, vet and filter the ideas
- Even then, you don't know whether the selected concepts are going to be successful

## FOCUSED IDEATION

- Far more efficient
- Guided by the data gleaned from the JTBD
- Results in far fewer ideas, but with much higher likelihood of success
- Reduces the time, cost and risk of innovation

DEFINE

MEASURE

ANALYZE

DESIGN

VERIFY



# PRE-LAUNCH VALIDATION

Verifying the effectiveness of new solutions pre-launch further reduces risk.

Imagine a product/service including **[NEW CONCEPT SOLUTION FEATURES]**. If you used such a product/service to help you **make a hole in sheet goods...**

...how satisfied would you be with your ability to...

	Not at all satisfied	Somewhat satisfied	Satisfied	Very satisfied	Extremely satisfied
Task 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Task 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

E.g., Minimize the time it takes to confirm the desired size of the hole

DEFINE

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# “WHY SHOULD WE HIRE SOMEONE TO HELP US WITH THIS?”

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## Data Quality

Customers and other stakeholders are more likely to be open and objective and give more useful responses to a third party than they would with you.

## Cost Efficiency

Your people have day jobs. This IS my day job. Having me handle this function allows your people to stay focused on what you hired them for and allows you to avoid staffing up on a project basis.

## Specialized Expertise

Engineerovation™ is a specialized methodology that is quite different from what research, marketing and development teams are used to engaging in. It requires training and experience to get right. I have that training and experience.





## “WHY SHOULD WE HIRE DANIEL SMALL?”

Engineer, MBA & Lean Six Sigma Black Belt with over 20 years of experience in the built environment

Launched new products/services w/ \$250M+ in annual revenue potential

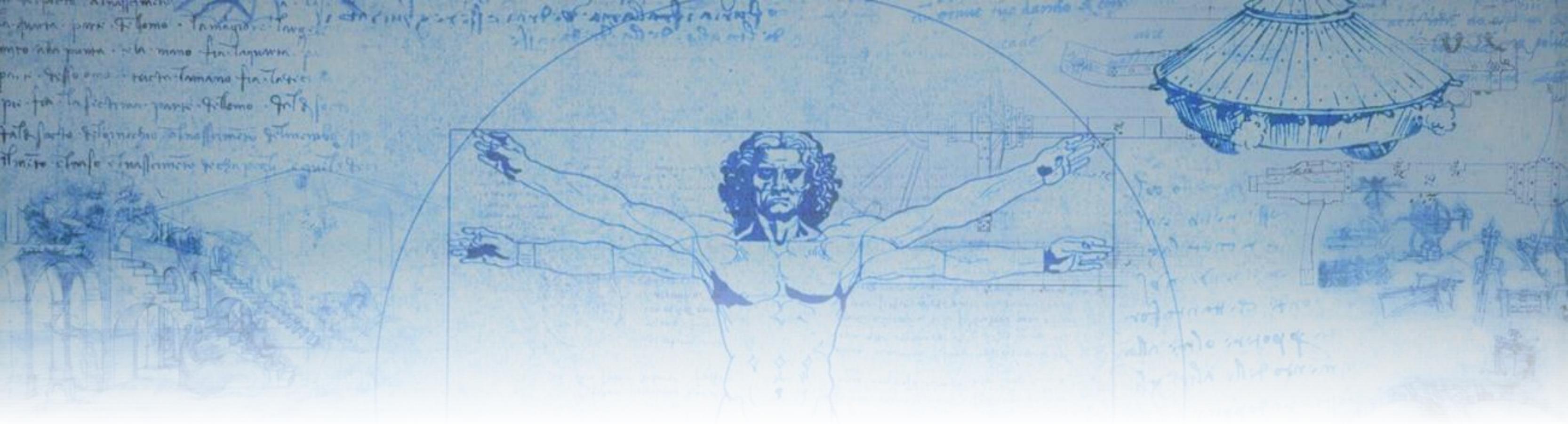
Developed/vetted 50+ new innovation opportunities totaling \$1 Trillion+ in annual revenue potential

Created 10+ prototypes of various new innovations

Conducted 15+ JTBD innovation projects

Authored/co-authored 20+ innovation strategies/roadmaps

Facilitated dozens of innovation seminars, classes & ideation sessions



# DaVinci

CONSULTING

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Certified ODI® Practitioner

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\*Sources:

- *The Innovator's Solution*, Christensen
- *Jobs To-Be Done: Theory to Practice*, Ulwick
- *Jobs To Be Done: A Roadmap for Customer-Centered Innovation*, Wunker

