Five Problem Solving Approaches: Overview

Problem Solving
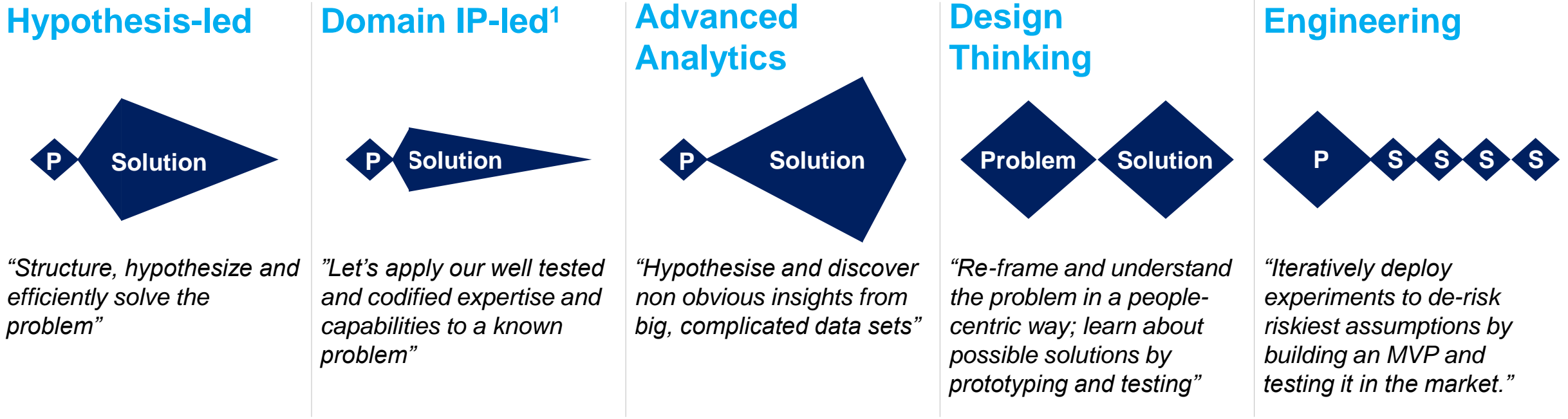
There are five common problem solving approaches

◀ Divergent thinking ▶ Convergent thinking

The core characteristics of effective problem solving

- Impact-oriented
- Top management perspective

- Clear problem definition
- Structured

- Iterative
- Rigorous

- Objective
- Fact-based

- Driving to synthesis
- Creative

Hypothesis-led

"Structure, hypothesize and efficiently solve the problem"

Domain IP-led[1]

"Let's apply our well tested and codified expertise and capabilities to a known problem"

Advanced Analytics

"Hypothesise and discover non obvious insights from big, complicated data sets"

Design Thinking

"Re-frame and understand the problem in a people-centric way; learn about possible solutions by prototyping and testing"

Engineering

"Iteratively deploy experiments to de-risk riskiest assumptions by building an MVP and testing it in the market."

◀ Almost all projects might use a **combination of several approaches** ▶

1 Domain IP-led is based on codified knowledge and assets that emerged from repeated application of the other PS approaches

Hypothesis-led approach to problem solving: seven-step approach to structure, hypothesize and efficiently solve the problem

Typical problems (examples)

- Market entry decision
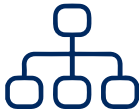
- Company / Business unit strategy

- M&A

P **Solution**
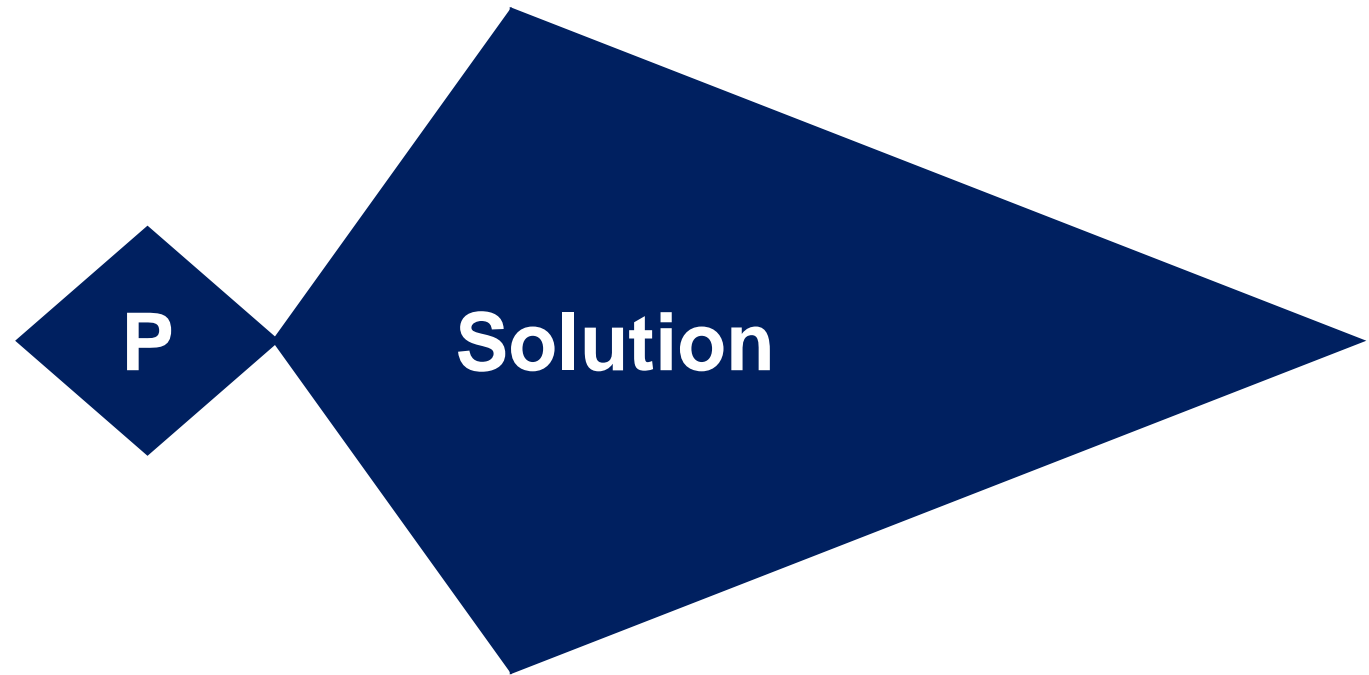
Hypothesis-led approach to problem solving: the seven-step approach to structure, hypothesize and efficiently solve the problem

P **Solution**

Define problem

Think **impact**: what do we need to know?

Structure problem

Think **disaggregation and early hypothesis**: what could be the key elements of the problem?

Prioritize issues

Think **speed**: which issues are most important to the problem?

Develop issue analysis/work plan

Think **efficiency**: where and how should we spend our time?

Conduct analyses

Think **evidence**: what are we trying to prove/disprove?

Synthesize findings

Think **"so what":** what implications do our findings have?

Develop recommendation

Think **potential solution**: what should we do?

Domain IP-led approach to problem solving: the "Accelerated" 7 steps approach where one applies a well-tested and codified expertise and capabilities to a known problem

Typical problems (examples)

- Healthcare analytics

- Procurement

Domain IP-led approach to problem solving: the "Accelerated" 7 steps approach where one applies a well-tested and codified expertise and capabilities to a known problem

P **Solution**

Define problem

Think **impact**: what do we need to know?

Develop scoping / data preparation

Understand situation, tailor IP/asset to it and pilot

Apply IP

Gather data and conduct analysis

Synthesize findings

Think "**so what**": what implications do our findings have?

Develop recommendation

Think **potential solution**: What should we do?

5Is is the Advanced Analytics approach to problem solving: it is used to hypothesize and discover non-obvious insights from big, complicated data sets

Typical problems (examples)

- Acquisition/churn analysis

- R&D optimization

- Pricing optimization
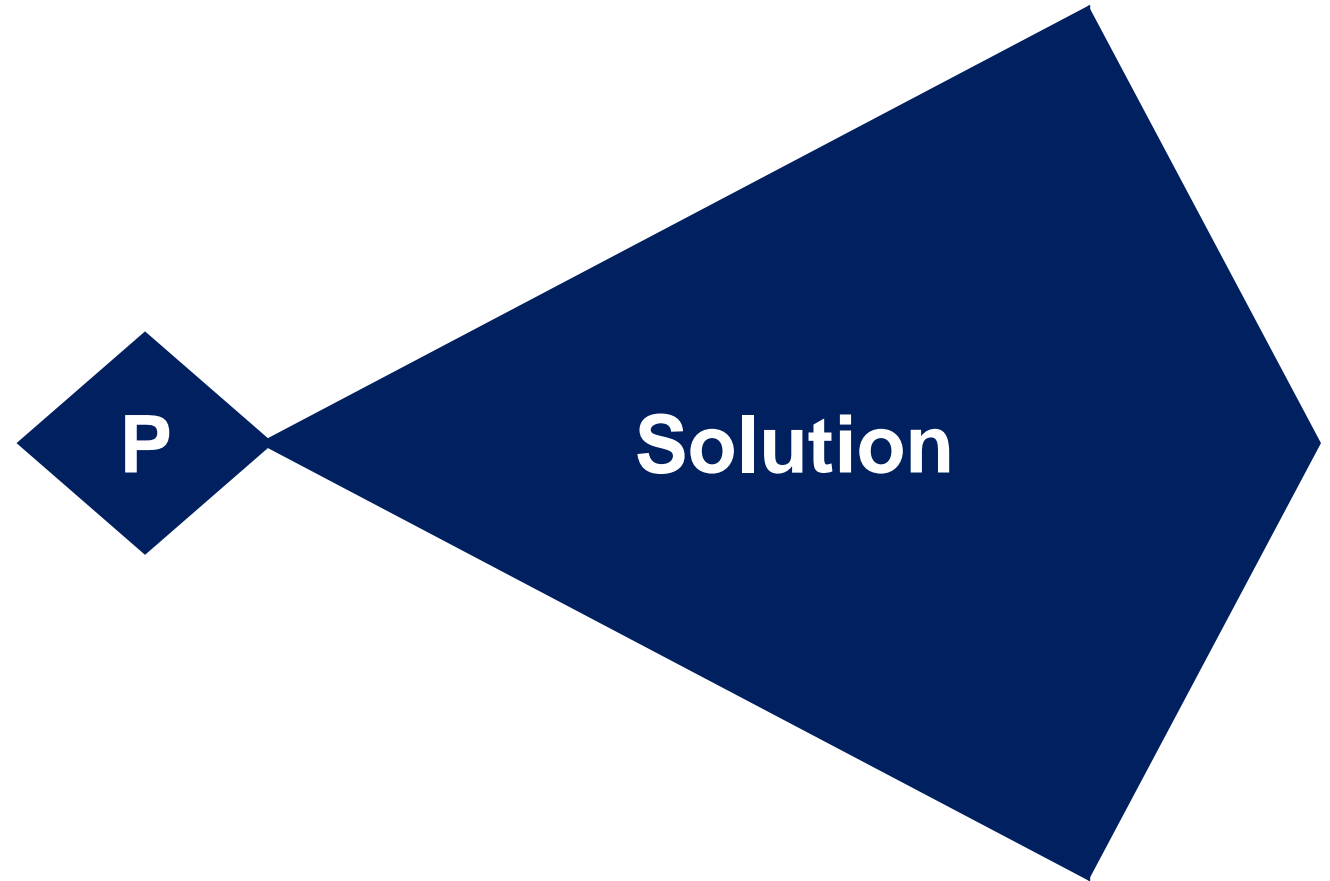
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Solution

5Is is the Advanced Analytics approach to problem solving: it is used to hypothesize and discover non-obvious insights from big, complicated data sets

Solution

Ideation

Bring together technical and industry expertise to identify opportunities for analytics-driven transformations

Intelligence

Estimate the value at stake in the opportunity, define and validate the proposed analytical approach, whilst ingesting and engineering the data

Inception

Translate the data into insights by engineering features, developing and evaluating analytical models, visualising the insights, and developing the set of interventions needed to improve the business

Interventions

Track and deliver the changes identified at the end of Inception to improve the business
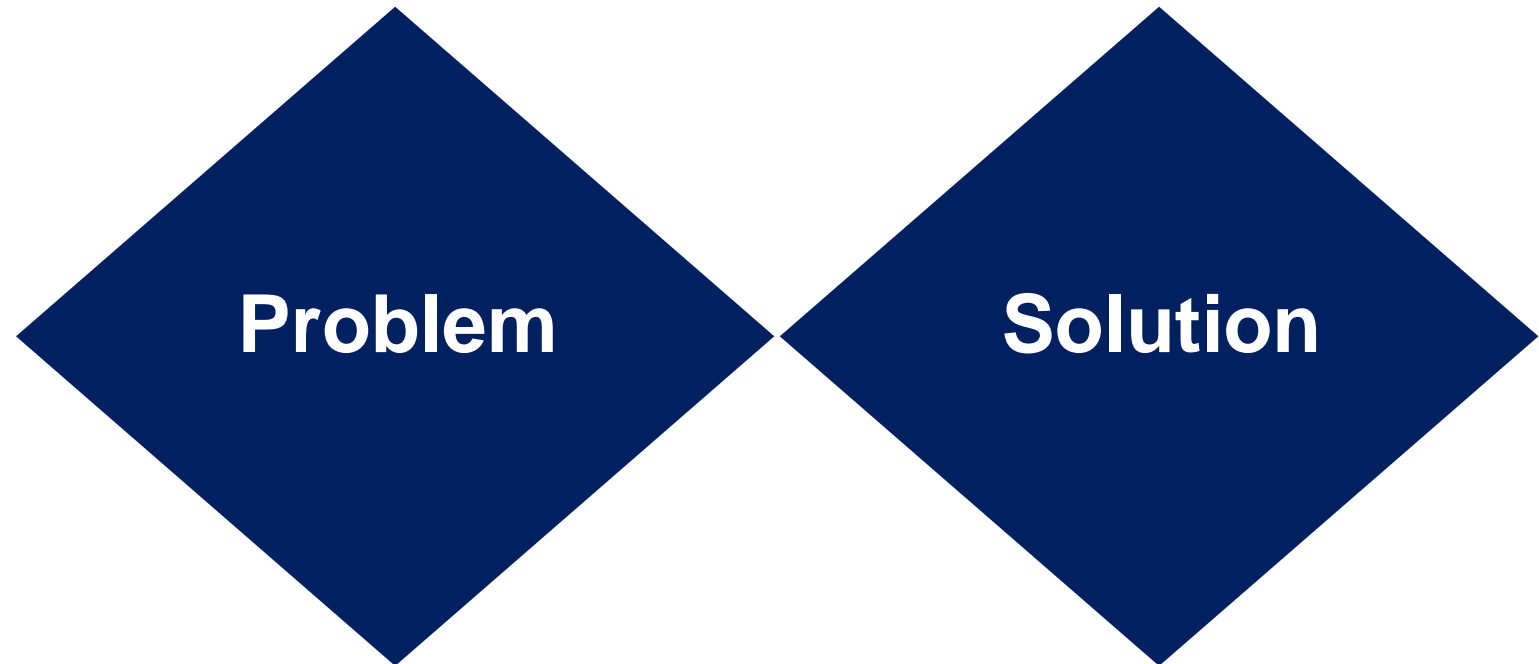
Independence

Transfer analytics skills and technology to sustain the impact and deliver future use cases

3-D is the Design Thinking problem solving approach to re-frame and understand the problem in a people-centric way

Typical problems (examples)

- Customer value proposition

- Product/service innovation

- Employee experience

Problem

Solution

3-D is the Design Thinking problem solving approach to re-frame and understand the problem in a people-centric way

Problem   Solution
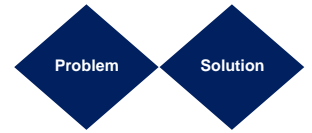
Discover

- Build insights into emotional needs to create impactful experiences; link these experiences to value by establishing a clear relationship to business outcomes

- Key activities include: immersive kickoff, research, synthesis of discovery findings, prioritization of opportunity areas

Design

- Create a plan for the construction of an object, system or measurable human interaction. A plan can consist of: architectural blueprints, engineering drawings or business processes

- Activities include: Immersion in best-in-class examples, initial designs, co-creation for refinement and feedback

Deliver

- Create flow of deliverables that help to further define and describe the solution to the problem. This solution can take the form of a digital product, a service or a physical product

- Activities include: design principles, concept briefs, prototypes or product concepts, business case

The Engineering approach to problem solving iteratively deploys experiments to de-risk assumptions by building an MVP and testing it in the market

Typical problems (examples)

- Digital product development

- Data architecture/ engineering

- Cloud adoption
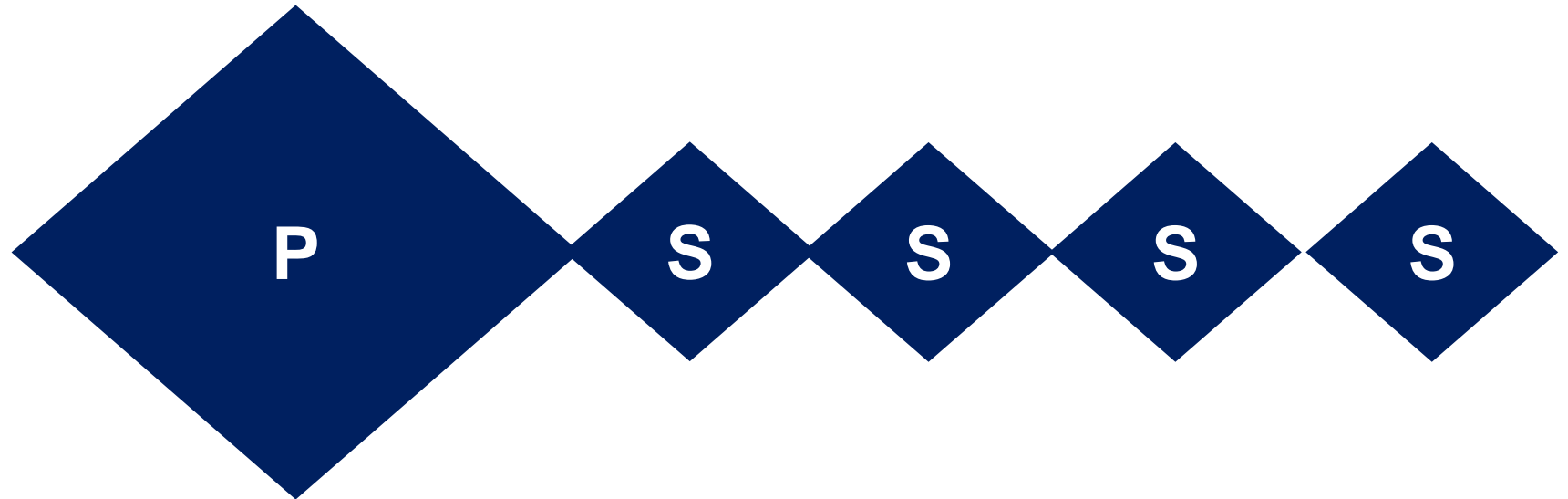
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The Engineering approach to problem solving iteratively deploys experiments to de-risk assumptions by building an MVP and testing it in the market

Define problem

Outline and understand what to build by defining a vision and value proposition, avoiding going into much detail

Example vision: build a business bank targeting SMBs in the UK

Launch first MVP

Design and launch the first minimum viable product with the product team, prioritising features which solve the key problem

Aim to launch as soon as possible

Test and iterate

Following the MVP launch, measure key metrics and make adjustments based on continuous feedback

Launch subsequent versions at greater scale, building features in an iterative and incremental fashion

Output

Transfer technology / product knowledge for sustained impact to continue running the product that has been developed