The Policy Project Innovation Seminar

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Wellington, 10th February 2019

STATES OF CHANGE

nesta

Welcome

What is your experience with innovation?

What questions or needs do you have?

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What are the three keywords that you think should be found in the definition of innovation…

STATES OF CHANGE

Let's start with a challenge…

STATES OF CHANGE

How might we tackle childhood obesity?

STATES OF CHANGE

# How might we tackle childhood obesity?
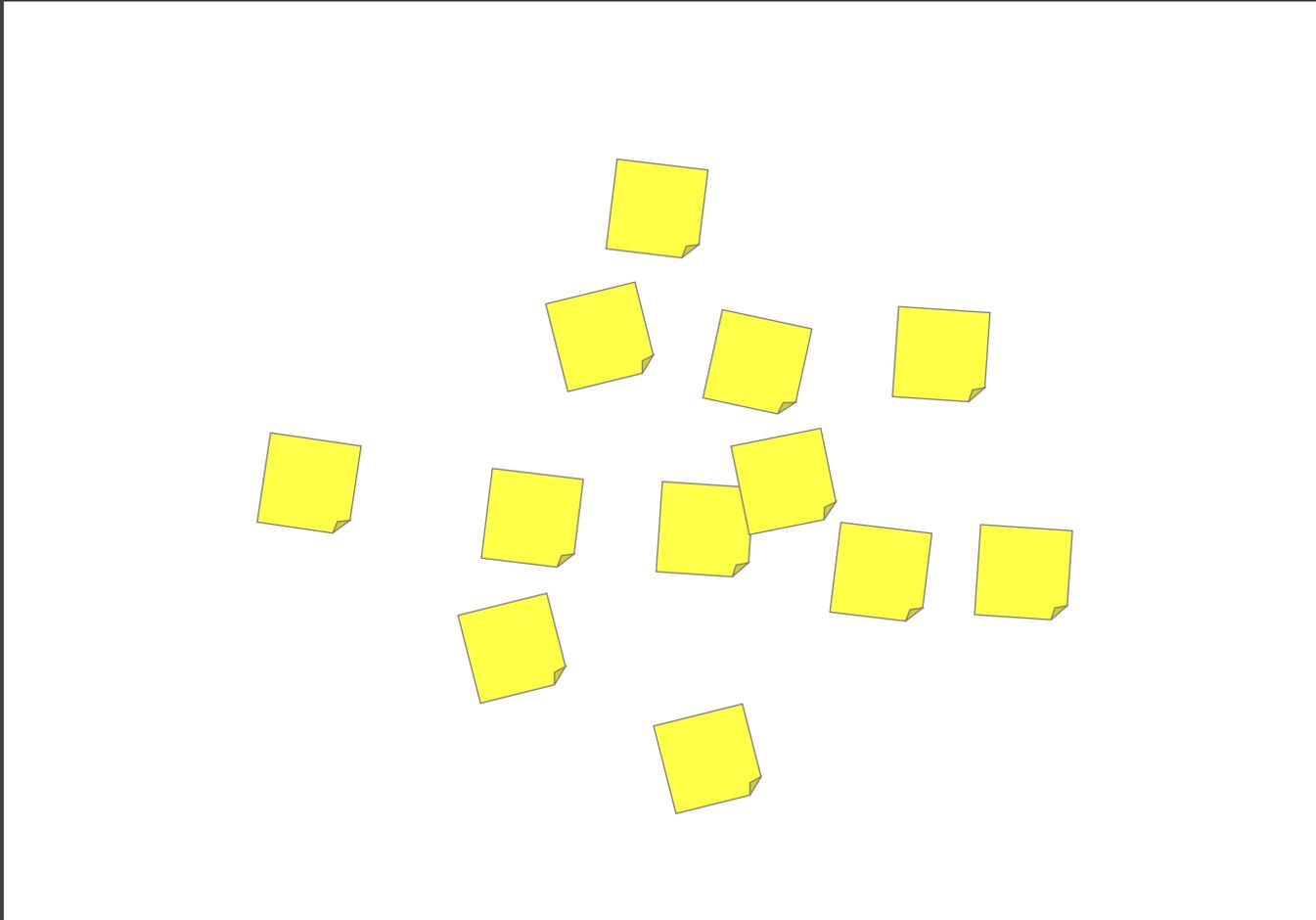
Generate as many ideas as possible.
Write each idea on a post it and stick it on the sheet.

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5 min.
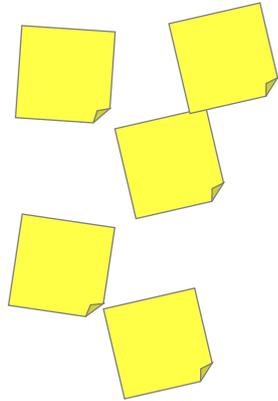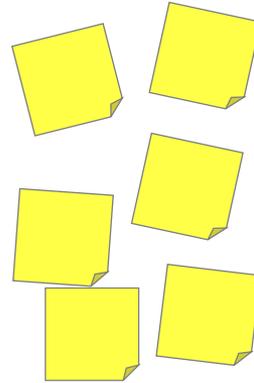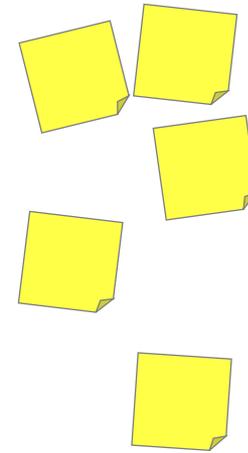
Cluster your ideas into three categories

WILL CERTAINLY WORK

WILL PROBABLY WORK

DON'T KNOW IF IT WILL WORK

STATES OF CHANGE

5 min.
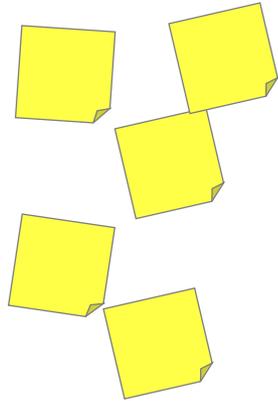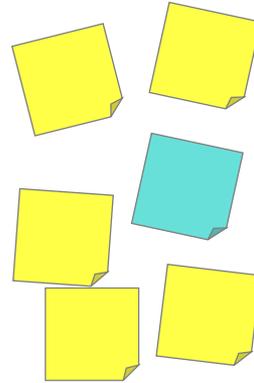
WILL CERTAINLY WORK　　**WILL PROBABLY WORK**　　**DON'T KNOW IF IT WILL WORK**
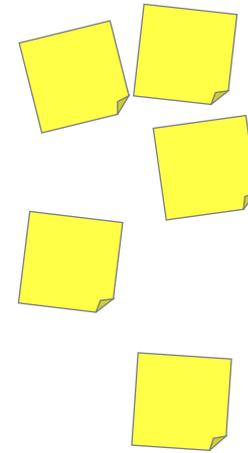
Select the best idea that you think might work.

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1 min.

Welcome to the room of the unobvious

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"Innovation amateurs talk good ideas; innovation experts talk testable hypothesis."

Michael Schrage

STATES OF CHANGE

The core of the experimental mindset

IDEAS → SOLUTION

IDEAS ⟶ HYPOTHESIS

"A hypothesis is a testable belief about future value creation"

Michael Schrage

Turn your idea into a testable hypothesis.

Back to the definition of innovation…
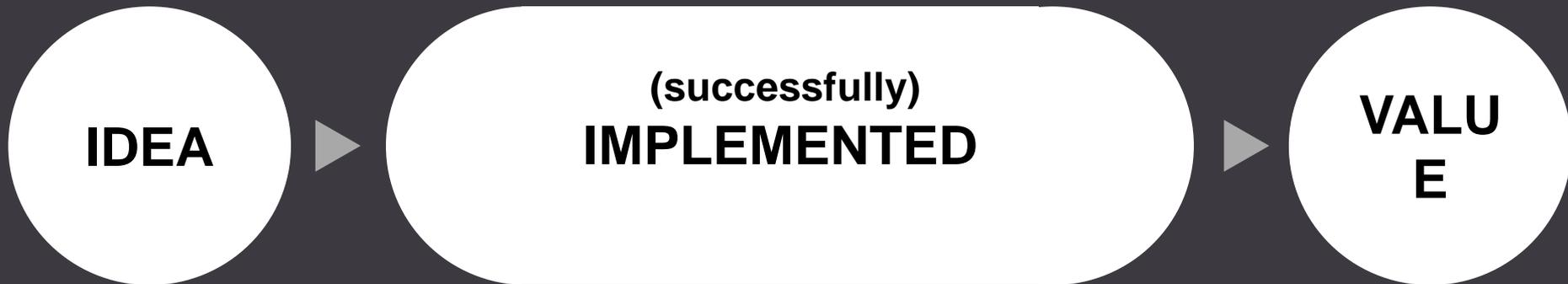
STATES OF CHANGE

Note, in reality it may look like this…

IDEA

VALUE

VALUE

STATES OF CHANGE
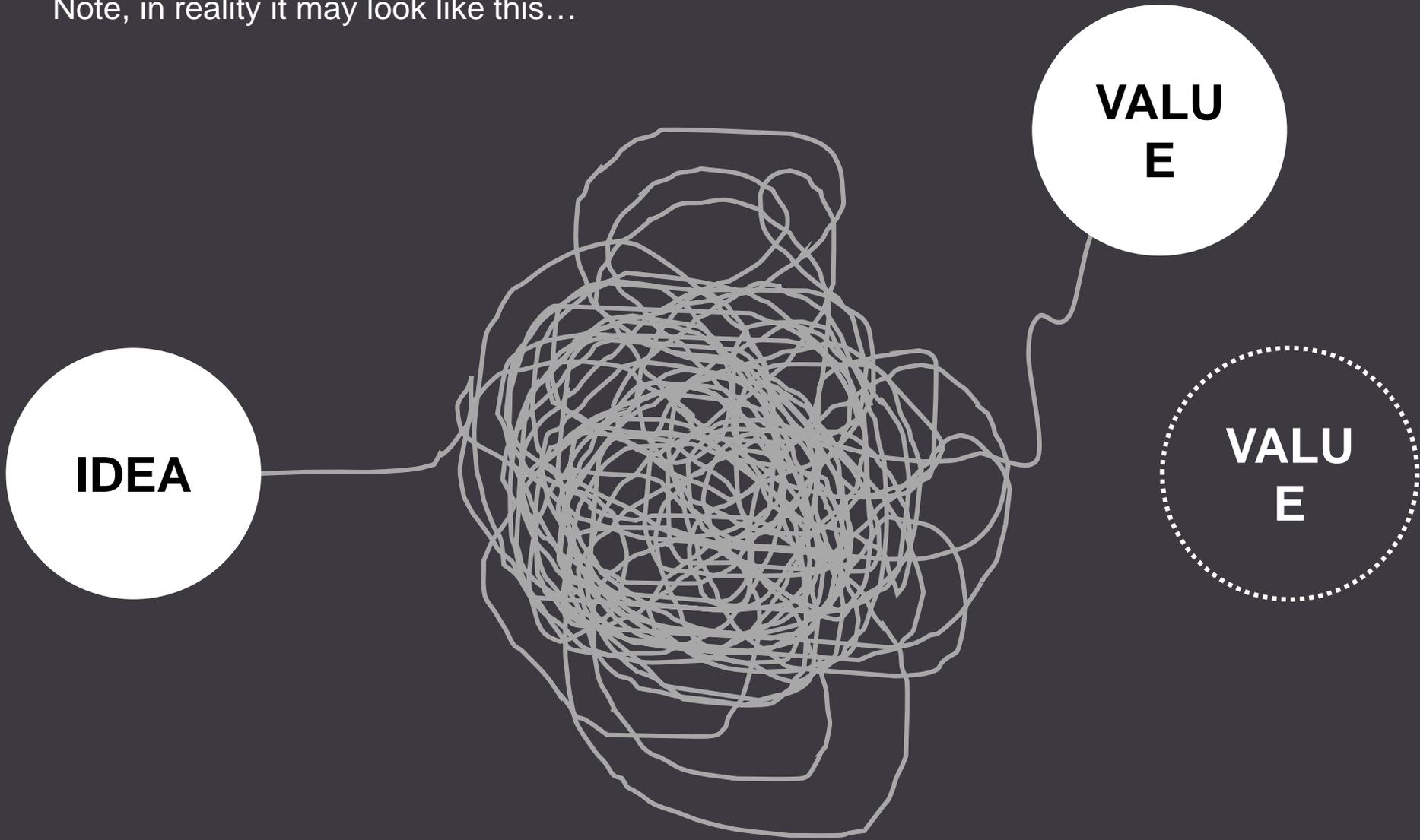
Experimentation is a systematic way of dealing with uncertainty.

Moving from the unknown to known

SOLUTIONS ARE UNKNOWN
Understanding of the problem is unclear. Risk cannot be managed.

SOLUTIONS ARE KNOWN
Understanding of the problem is clear. Risk can be managed.

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Three categories of experimentation

Embrace uncertainty ———————————————————————— Manage risk

Imaginative mindset
WHAT IF...?

Analytical mindset
IF...THEN...

SOLUTIONS ARE UNKNOWN
Understanding of the problem is unclear. Risk cannot be managed.

SOLUTIONS ARE KNOWN
Understanding of the problem is clear. Risk can be managed.

EXPLORE	TRIAL-AND-ERROR	VALIDATE
GENERATING HYPOTHESES What might be	**ESTABLISHING A HYPOTHESIS** What could be	**VALIDATING A HYPOTHESIS** What should be
Shaping direction Action is taken to open up new possibilities	**Creating basis for redesign** Action is taken to find out what works	**Legitimising initiative** Action is taken to justify decision making

SUGGESTED METHODS

Speculative Design, Foresight, Ethnographic Research, Positive Deviance, etc	Prototyping, Human Centred Design, Behavioural Economics, etc	Randomised Control Trials, Pilots, A/B Testing, Multiple Parallel Experiments, etc

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Three mindsets

what if …

(what) if …. then ….

if … then …

EXPLORE
(artist)

TRIAL & ERROR
(designer)

VALIDATE
(scientist)

Which has implications for team design

What do you actually know?

100%

HERE BE DRAGONS

VALIDATE

Knowing what the solution is

EXPLORE

TRIAL & ERROR

0%

0%   **Knowing what the problem is**   100%

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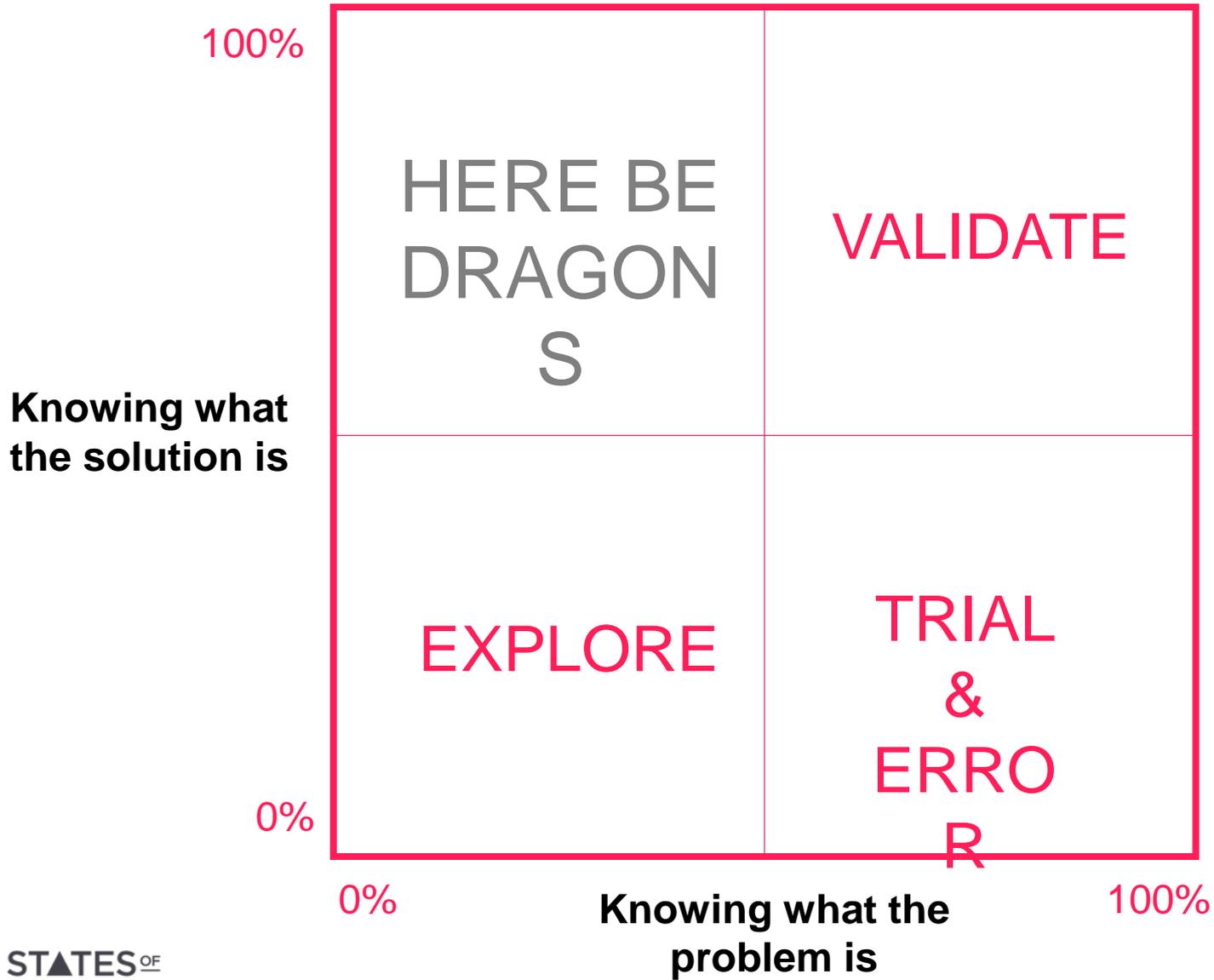
Why we should explore (the unobvious)…

The streetlight effect: we tend to look where it is easiest

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Space of the obvious

Space of the unobvious

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Innovation happens in the "adjacent possible" (Steven Johnson)

ACTUAL

POSSIBLE

How do you go about exploring this space of the unobvious?

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Landscape of innovation approaches

TALENT SPACE — Empowering people

Team / Organisational Design · Experimental Culture · Experimental Leadership · Ambidextrous Leadership · Adaptive Leadership · Innovation Learning / Pedagogy · Talent Management · System Leadership · Adaptive Management · Change Management

INTELLIGENCE SPACE — Understanding reality

Sensemaking · Collective Intelligence · Lead User Innovation · Design Research · Ethnographic Research · Evidence-based Policy · Contextual Inquiry · Policy Analysis · Foresight · Critical Design · Speculative Design · Futures Analysis · Data Visualisation · "Nowcasting" · Reverse Engineering · Data Ethnography · Social Media Analysis · Citizen Generated Data · Agent Based Modelling · Big Data · Open Data

SOLUTION SPACE — Shaping reality

GovJams / Service Jams · Innovation Labs / Teams · Citizen Engagement · Challenges & Prizes · Co-creation · Reality labs · Democratic Dialogue · (Community) Asset Mapping · Regulatory Sandboxes · Accelerators · Social Innovation Camps · Transdisciplinary Design · Frugal Innovation · Jugaad · Minimal Viable Product (MVP) · Transition Design · Reverse Innovation · Riskiest Assumption Testing · Lean Startup · Behavioural Insights · Design Sprint · Prototyping · Gamification · Open Design · Alternative Finance · Impact Investment · Innovation/Creative Spaces · Social Innovation Camps · Crowdfunding · FabLabs · Hackathons · Crypto Currencies

Overlap areas: Open Innovation · Positive Deviance · Open Policy Making · Action Research · Systems Thinking · Systemic Design · Design Thinking · Randomised Control Trials · Human Centered Design · Living Labs · Service Design · Digital Transformation · User Experience Design

TECHNOLOGY SPACE — Enabling action

Digital Social Innovation · Smart Cities · Augmented Reality · Virtual Reality · Algorithmic Governance · Internet of Things · Artificial Intelligence / Machine Learning · Open Source · Blockchain · Sensors

Yet, we need to look beyond methods…

Six principles to explore the unobvious

PROBLEMS
Identifying and framing an issue

SYSTEMS
Taking a holistic view, identifying intervention points

FACTS
Using evidence and data

FUTURES
Exploring multiple possible futures

PEOPLE
Understanding people's experiences, building empathy

SOLUTIONS
Developing and testing solutions, mapping existing solutions

STATES OF CHANGE

People: building empathy

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A persona is a powerful tool to **develop a shared understanding** with your team about the people you work with or for.

Personas help a team to **make decisions** with "real people" in mind.

You may create more than one persona (to highlight differences backgrounds, objectives, skills, etc).

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Developing a persona

Develop a persona of the people who are most
affected by the issue.

20 min.
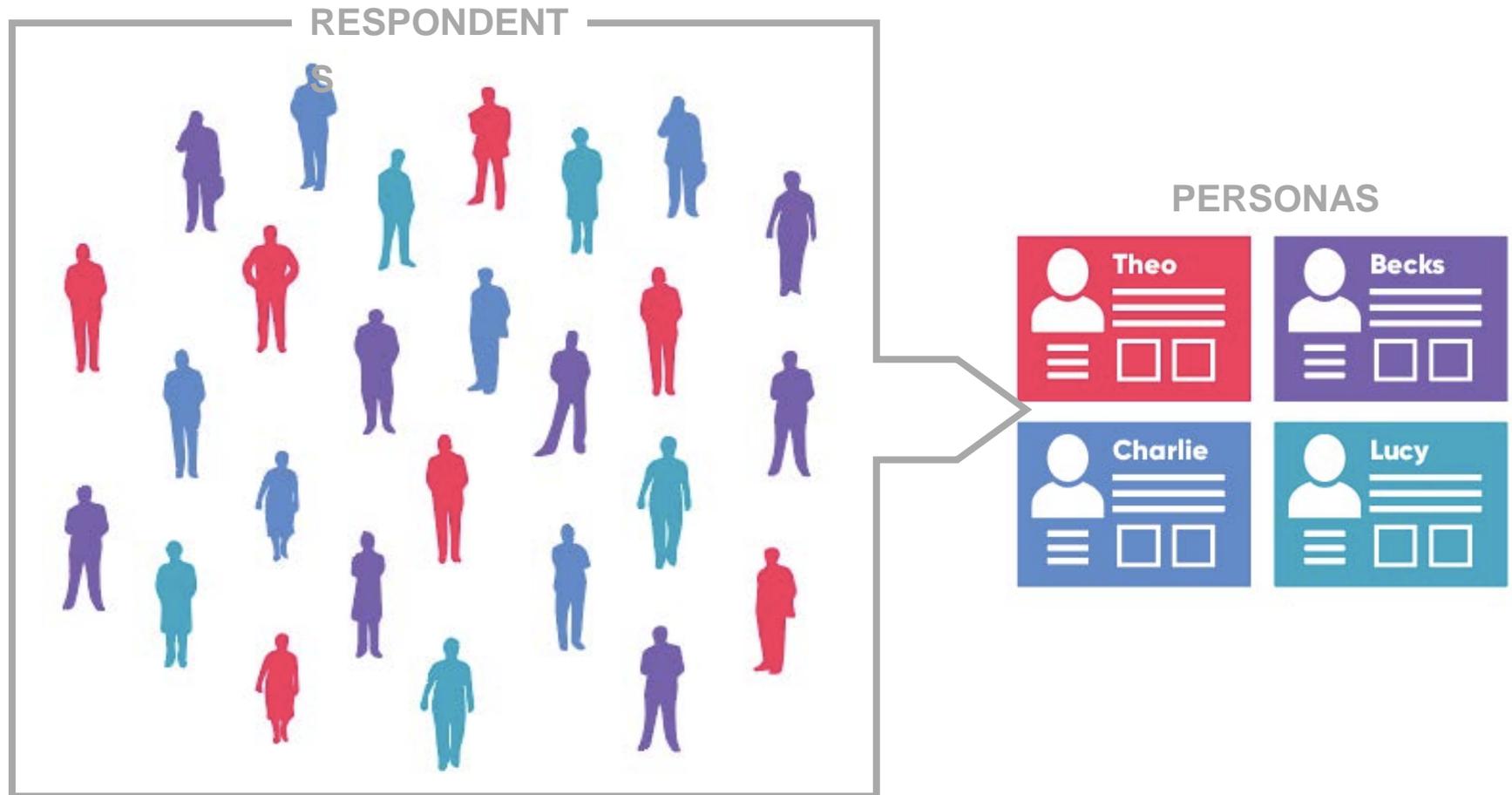
Personas

Personas are archetypes of fictional characters of groups of real people segmented by specific attributes (needs, motivations, habits, cultural background, social or demographic characteristics)

Where do you normally start?

How often do you actually engage with citizens to understand their experiences, needs, aspirations, struggles?

what people...

explicit/observable

say

do   use

tacit/latent

know   feel   dream

goals

intentions

ambitions

beliefs

values

why, why, why...

What is your proximity to the issue?

PROXIMITY

You need proximity to create empathy.

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What stories – from direct observation – can you tell about the people most affected by the issue?

Did you experience any struggles populating the sheet?

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What do we know?

(Validated) knowledge	Assumptions	Knowledge gaps

What do you know for sure?
For which you have evidence to support your claims

What do you think you know for sure?
But, for which you don't have any evidence to support your claims

What is it that you don't know?
For which you need to do research

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Systems: mapping the big picture

STATES OF CHANGE
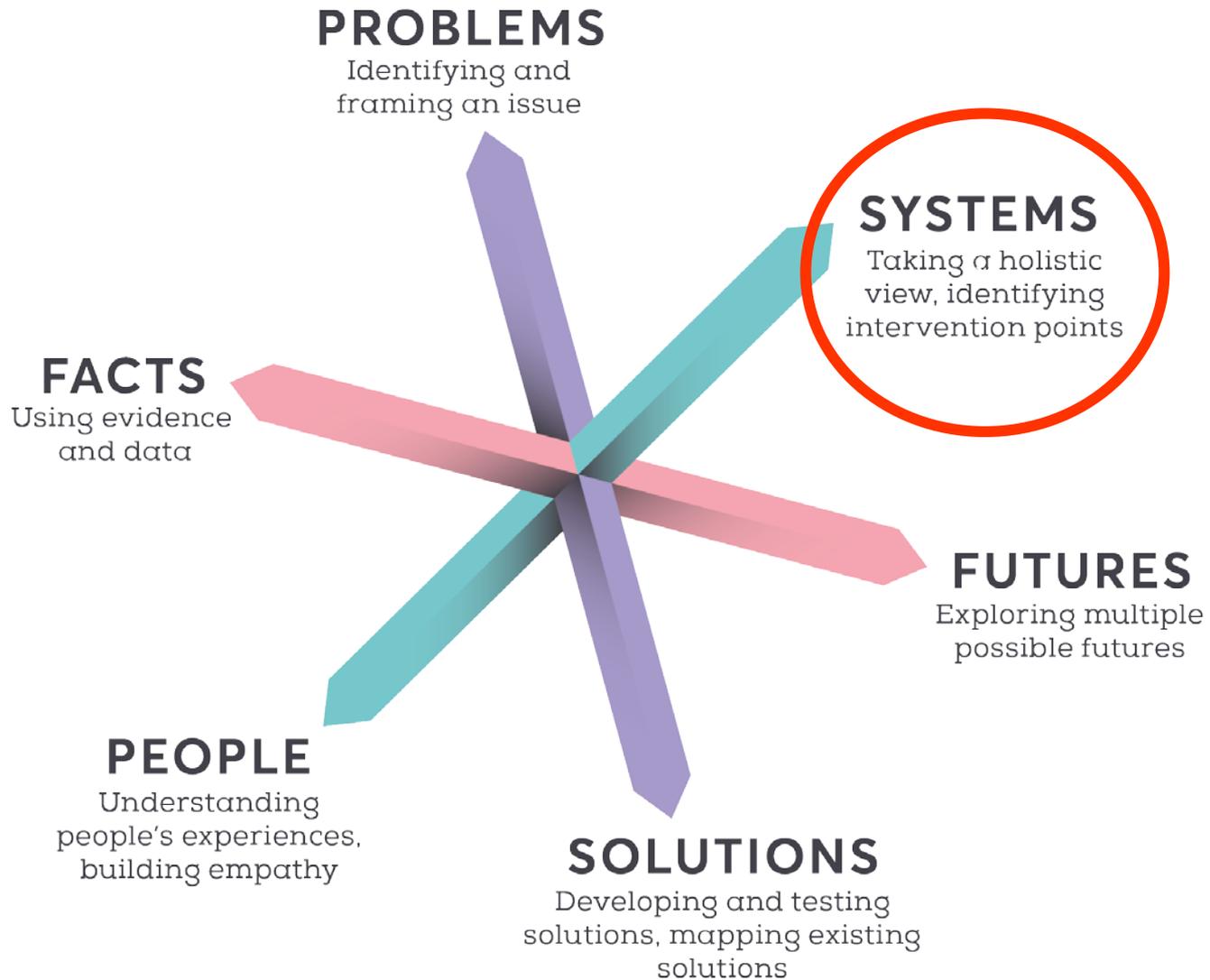
Not all problems are born equal

SIMPLE	COMPLICATED	COMPLEX
It involves a few components and actors	It involves a many components and experts	It involves many actors with conflicting interests
Clear end state: we can tell when the problem is solved	Clear end state: we can tell when the problem is solved	No clear end state: new problems may occur
Procedures to solve the problem involve a few simple and clear steps	Procedures to solve the problem involve many steps and a specific order	Procedures to solve the problem are unclear, not known, requires trials & error to see what works

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Issue Mapping

Issue Mapping
This tool helps you to set out the different levels of issues associated with your complex challenge, and identify the drivers behind them.

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Team:

Project title:

....

....

Sub Issue

Key Issue

Key Issue

Key Driver

Key Driver

DESCRIBE YOUR COMPLEX CHALLENGE

Sub Issue

Sub Issue

Key Driver

Key Issue

Key Issue

Key Driver

Sub Issue

Leverage Points:

STATES OF CHANGE
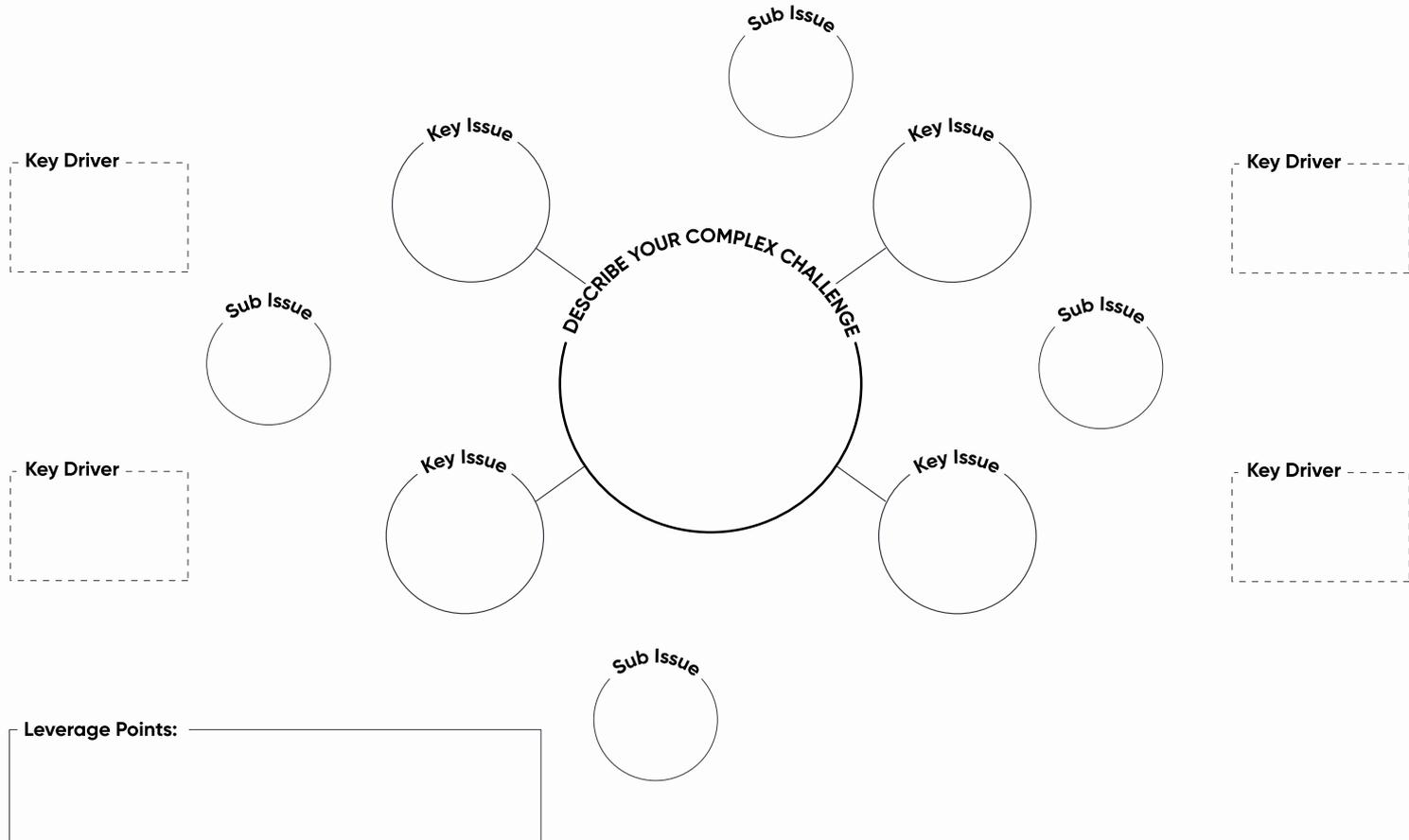
Exercise: Issue Mapping your challenge
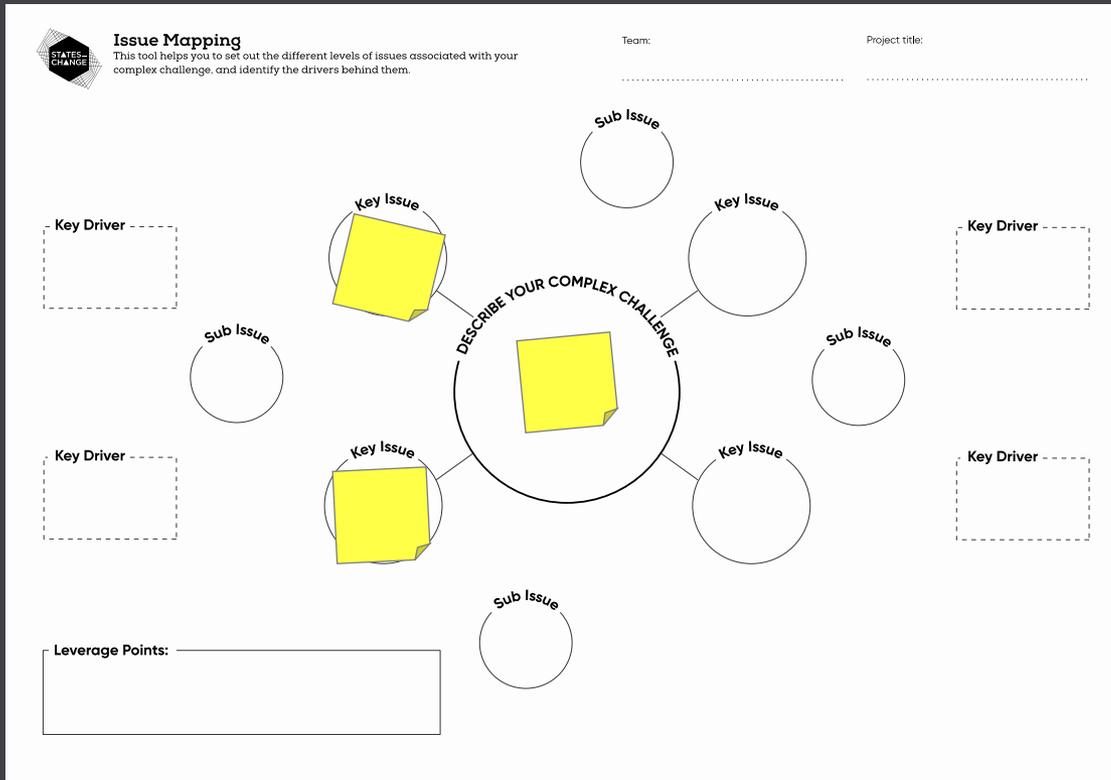
- Describe your challenge in circle at middle of worksheet

- Describe max 4 key issues that constitute your challenge

- Describe min 3 sub issues that contribute to 1 or more key issues

- Describe min 2 drivers that influence sub or key issues

- Define max 3 leverage points

Full Map
Clusters
Core Loop
Individual Psychology
Social Psychology
Individual Activity
Activity Environment
Food Consumption
Food Production
Individual Physiology
Physiology

System

Education

Media Availability

Availability of Passive Entertainment Options

Acculturation

Media Consumption

Sociocultural Valuation of Food

Social Acceptability of fitness

Importance of Ideal body-size image

Conceptualisation of Obesity as a Disease

Peer Pressure

Female Employment

Societal Pressure to Consume

Pressure for Growth & Profitability

Effort to Increase Efficiency of Consumption

Pressure on job performance

Effort to Increase Efficiency of Production

Level of Employment

Desire to Minimize Cost

Desire to Maximize Volume

Pressure to Improve Access to Food Offerings

Pressure to Cater for Acquired Tastes

Cost of Ingredients

Standardisation of Food Offerings

Desire to Differentiate Food Offerings

Market Price of Food Offerings

Demand for Health

Purchasing Power

Nutritional Quality of Food & Drink

Fibre Content of Food & Drink

Exposure to Food Advertising

TV Watching

Perceived Lack of Time

Parental Control

Children's Control of Diet

Social Rejection of Smoking

Smoking Cessation

Food Exposure

Food Abundance

De-skilling

Demand for Convenience

Convenience of Food Offerings

Food Variety

Alcohol Consumption

Palatability of Food Offerings

Energy-Density of Food Offerings

Portion Size

Rate of Eating

Tendency to Graze

Force of Dietary Habits

Strength of Lock-in to Accumulate Energy

Self Esteem

F2F Social Interaction

Food Literacy

Individualism

Stress

Use of Medicines

Psychological Ambivalence

Demand for Indulgence/Compensation

Desire to Resolve Tension

Conscious Control of Accumulation

ENERGY BALANCE

Importance of Physical Need

Effort to Acquire Energy

Tendency to Preserve Energy

Level of Available Energy

Level of Satiety

Degree of Primary Appetite Control

Degree of Optimal GI Signaling

Extent of Digestion and Absorption

Level of Adipocyte Metabolism

Level of Fat Free Mass

Appropriateness of Nutrient Partitioning

Resting Metabolic Rate

Level of Thermogenesis

Genetic and/or Epigenetic Predisposition to Obesity

Appropriateness of Maternal Body Composition

Quality & Quantity of Breast Feeding and Weaning

Appropriateness of Child Growth

Appropriateness of Embryonic & Fetal Growth

Scientific Inconsistency

Parental Modeling of Activity

Degree of innate Activity in Childhood

Learned Activity Patterns in Early Childhood

Opportunity for Team-Based Activity

Perceived Danger in Environment

Degree of Physical Education

Sociocultural Valuation of Activity

Access to Opportunities for Physical Exercise

Cost of Physical Exercise

NEAT Non-Volitional Activity

Level of Recreational Activity

Level of Domestic Activity

Reliance on Labor-Saving Devices & Services

Social Depreciation of Labor

Physical Activity

Level of Occupational Activity

Dominance of Sedentary Employment

Safety of Unmotorised Transport

Level of Transport Activity

Dominance of Motorised Transport

Walkability of Living Environment

Opportunity for Unmotorised Transport

Functional Fitness

Ambient Temperature

Reliance on Pharma Remedies

Reliance on Surgical Interventions

Level of Infections

Predisposition to Activity

Side-Effects of Medicine

Media
Social
Psychological
Economic
Food
Activity
Infrastructure
Developmental
Biological
Medical

Negative Influence

Positive Influence

shiftⁿ
clarity in com

copyright® 2008 shiftn cvba

A systems map is a visual representation of underlying complexity that helps us identify insights in ways that would not have been possible from a single perspective.

Systems mapping helps us build shared understanding. The process facilitates a constructive dialogue about where we can intervene to bring about systems change.

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Problems: (re)framing challenges

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STATES OF CHANGE
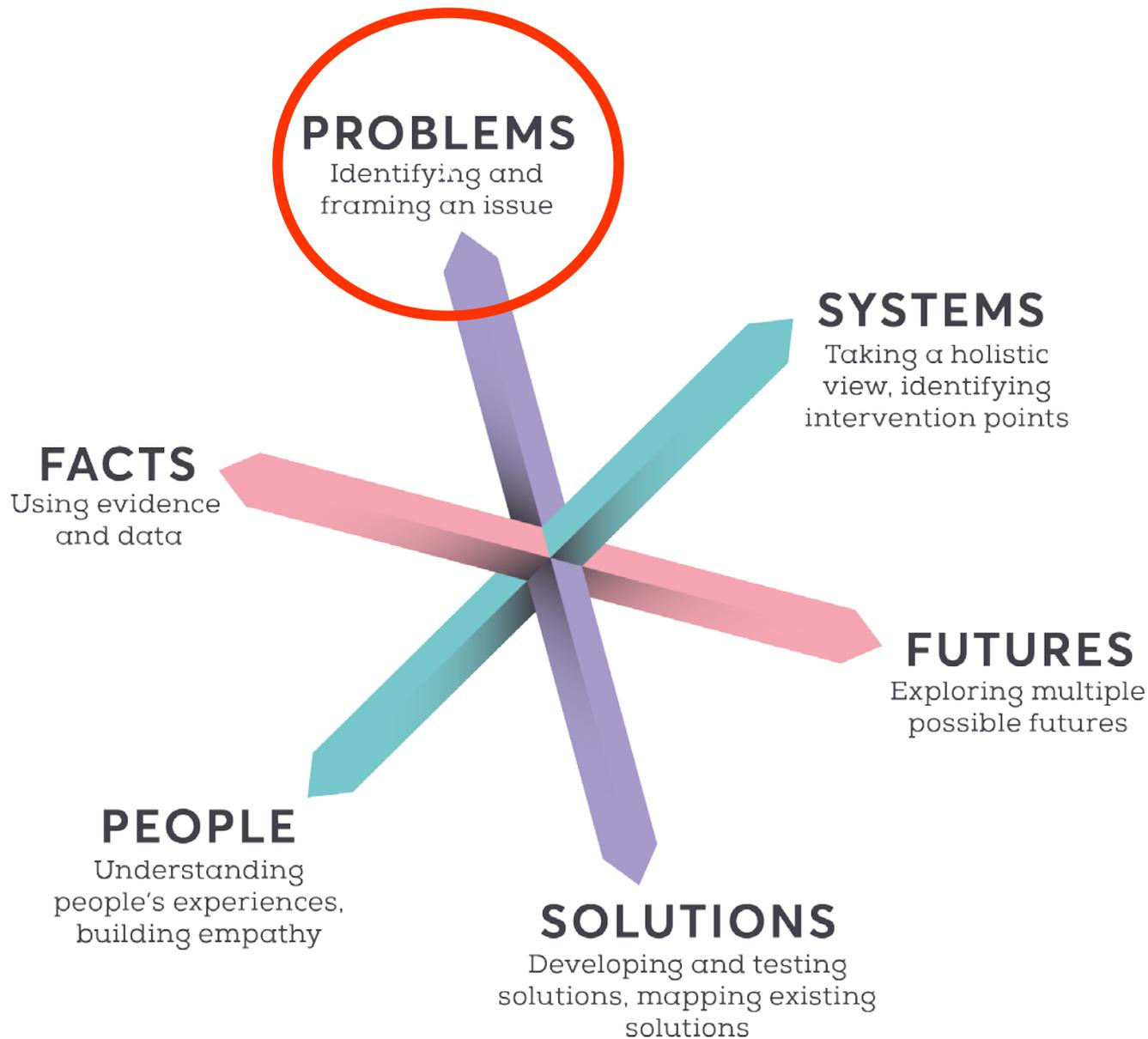
What is a frame?
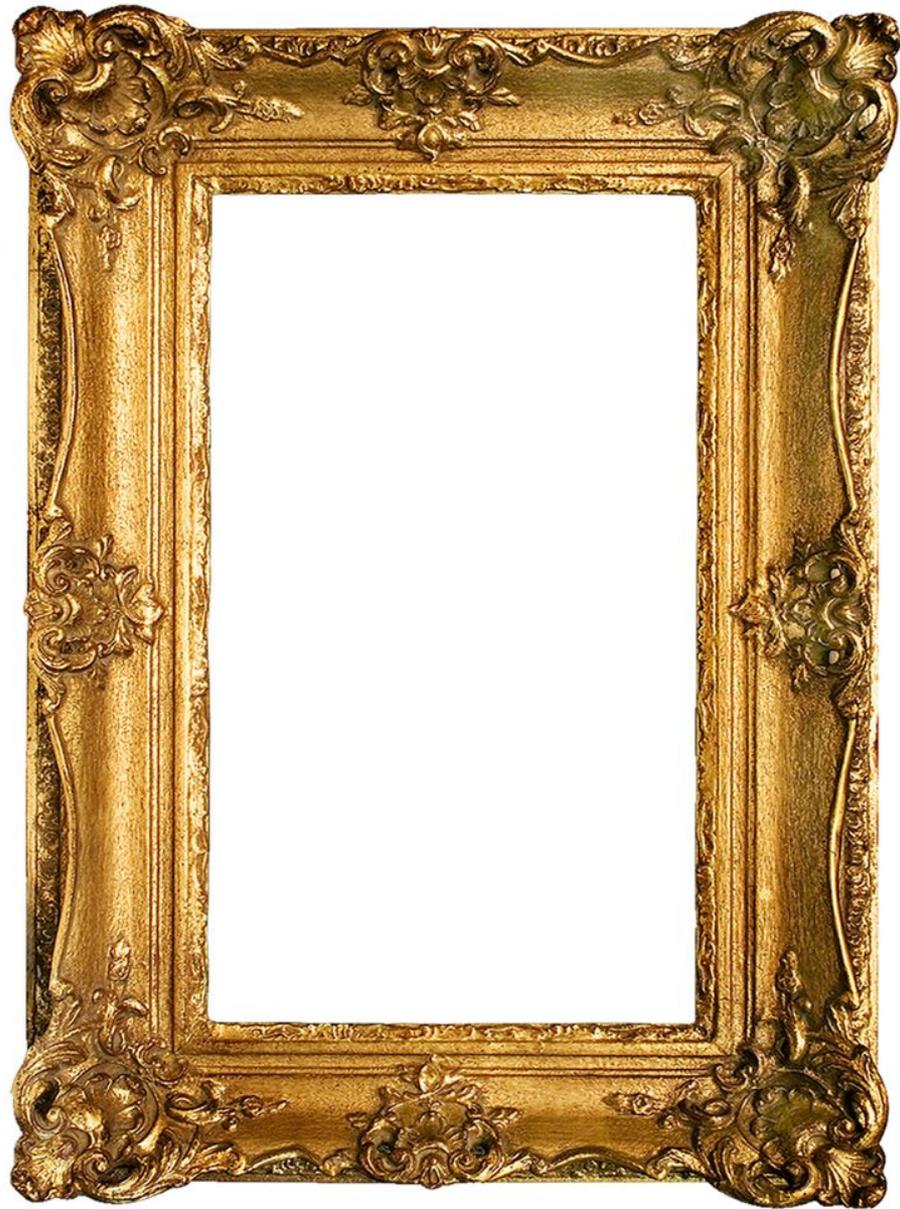
Why do we use frames?

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In the social sciences, **framing** comprises a set of concepts and theoretical perspectives on how individuals, groups, and societies, organize, perceive, and communicate about reality. Framing involves social construction of a social phenomenon – by mass media sources, political or social movements, political leaders, or other actors and organizations. Participation in a language community necessarily influences an individual's *perception* of the meanings attributed to words or phrases.

Wikipedia

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Why do we frame challenges?
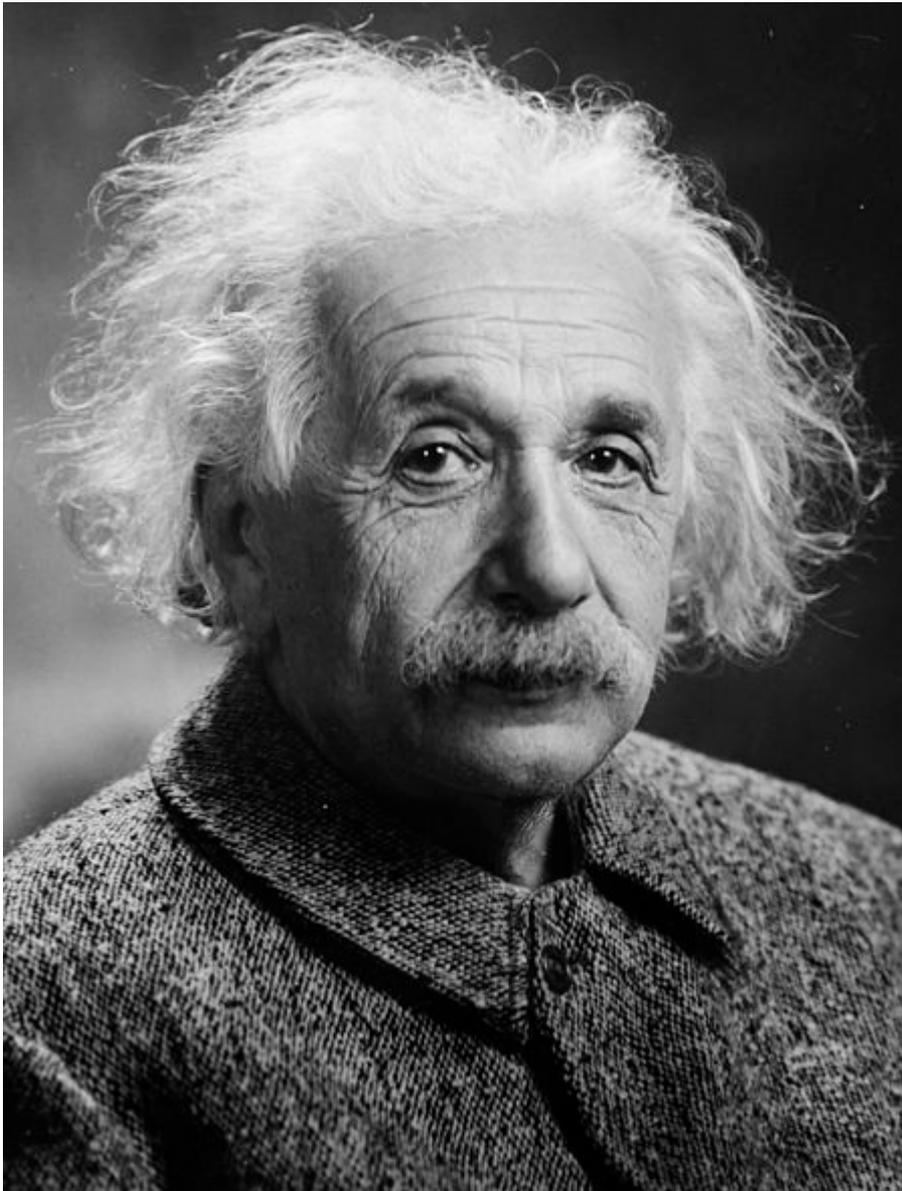
If I had only one hour to save the world, I would spend fifty-five minutes defining the problem, and only five minutes finding the solution.

Albert Einstein
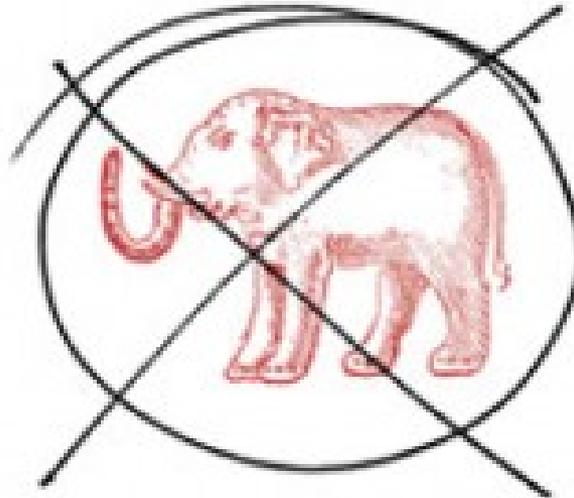
STATES OF CHANGE

How might we reframe?

How might we shift our perspective?

Time

Time

Scale

https://www.youtube.com/watch?v=w8QI8LALI8g

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Powers of Ten, Ray and Charles Eames
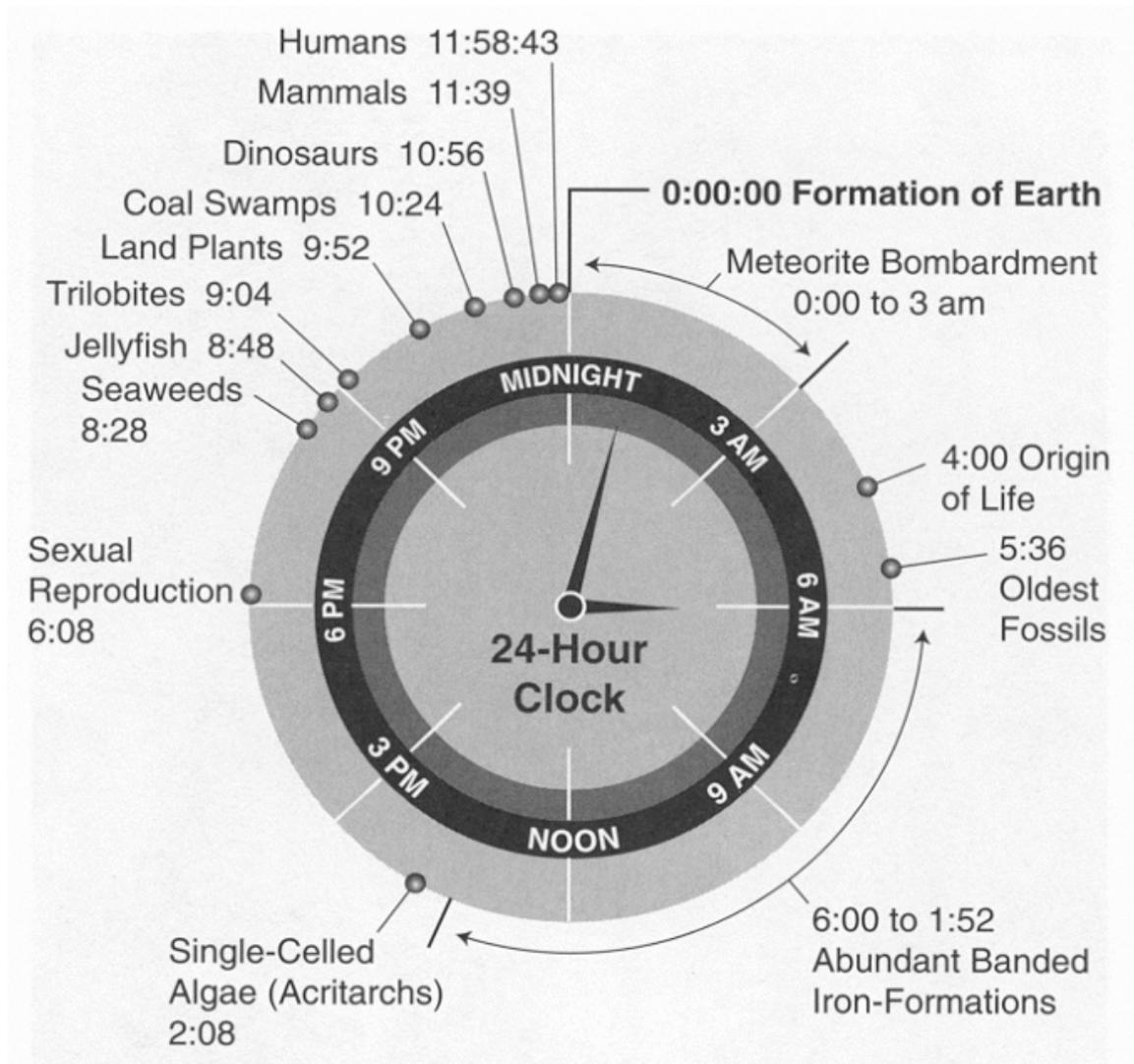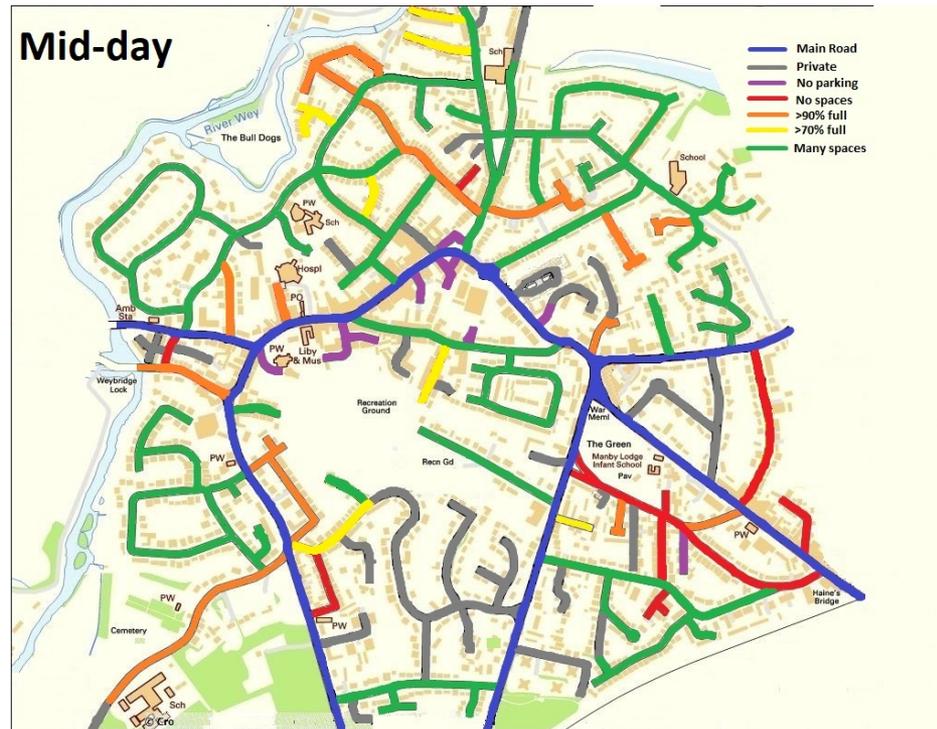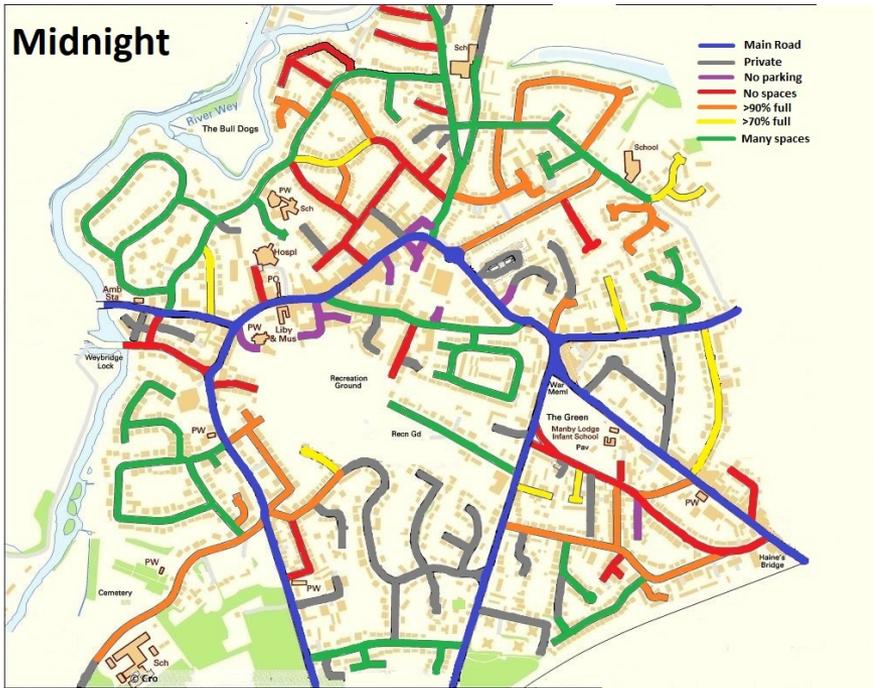
Reversing
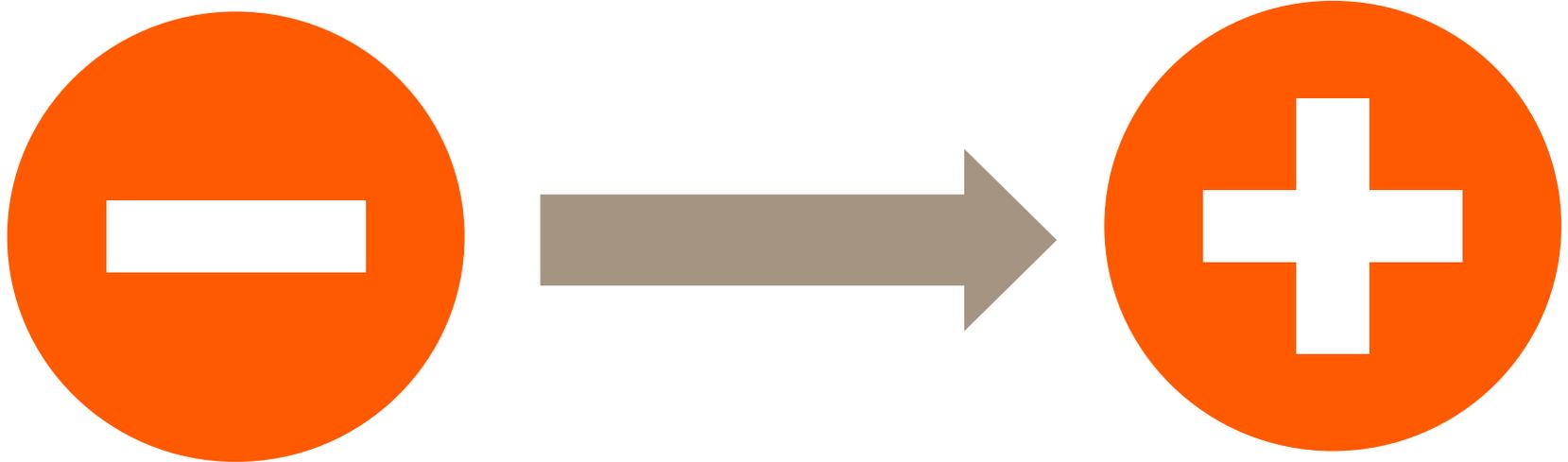
from needs to potential

from limitations to opportunities

from barriers to possibilities

Reframing: from liabilities to assets

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Presence/absence

From needs to potential

By analogue

a person or thing seen
as comparable to
another.

STATES OF CHANGE

By analogue

How to improve the handover of patients from the operation theatre to the intensive care unit?

How might we organise the treatment or care programme around the patients?

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Subject/object
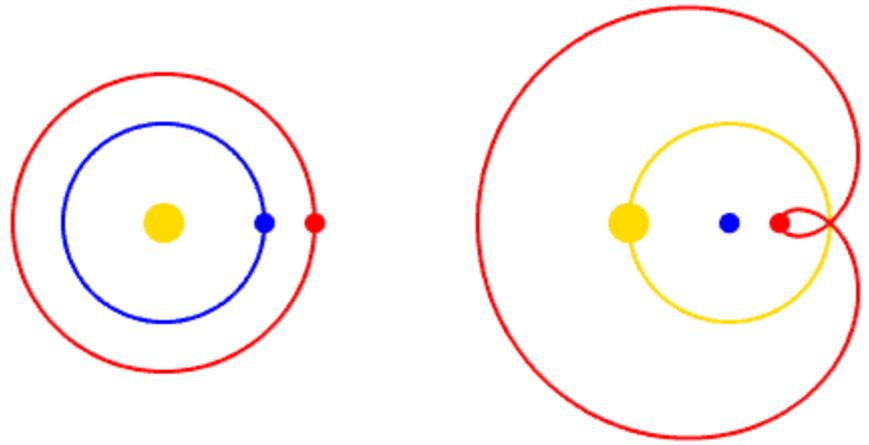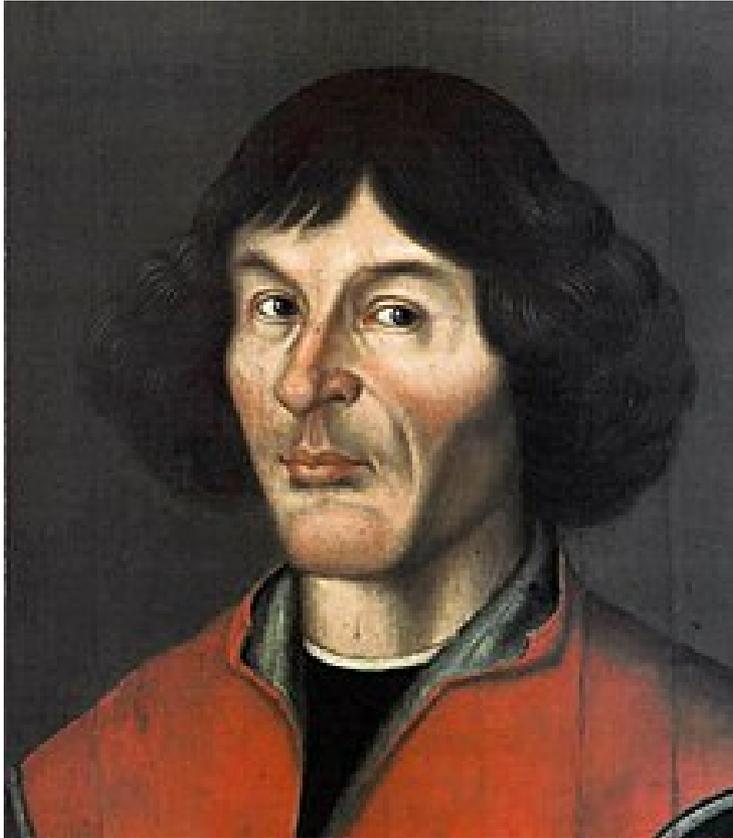
Exaggeration
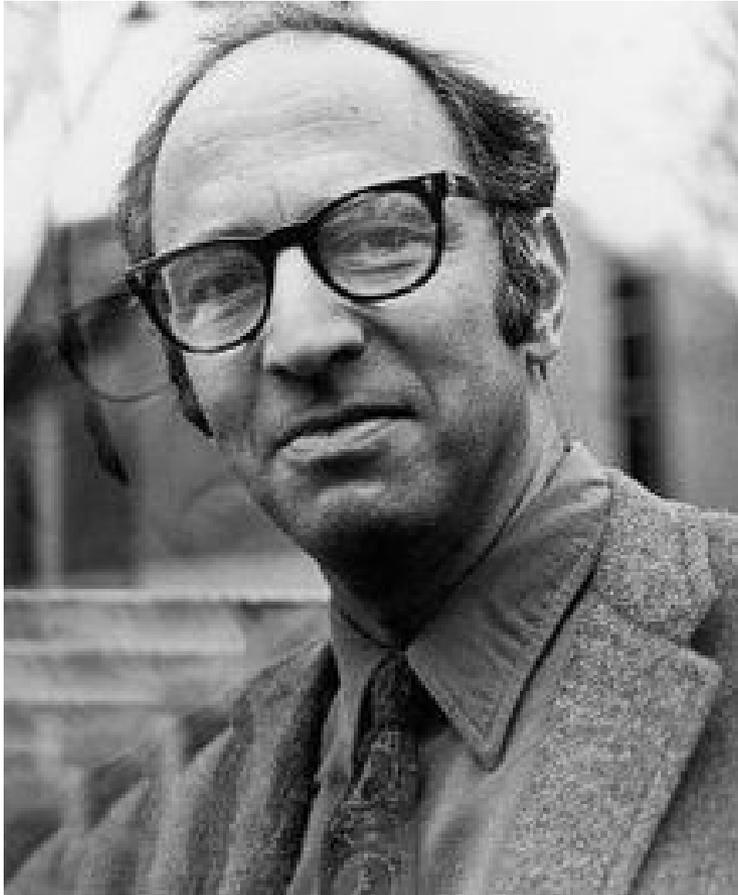
"A new scientific truth does not triumph by convincing its opponents and making them see the light, but rather because its opponents eventually die, and a new generation grows up that is familiar with it."

Thomas Kuhn
'The Structure of Scientific Revolutions'

STATES OF CHANGE

Time

Scale

Deficit/assets

Negative/positive

Subject/object

Presence/absence

Paradigm shift

By analogue

Exaggeration

How might you reframe your challenge, using one or more of these tactics?

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PROBLEMS
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framing an issue

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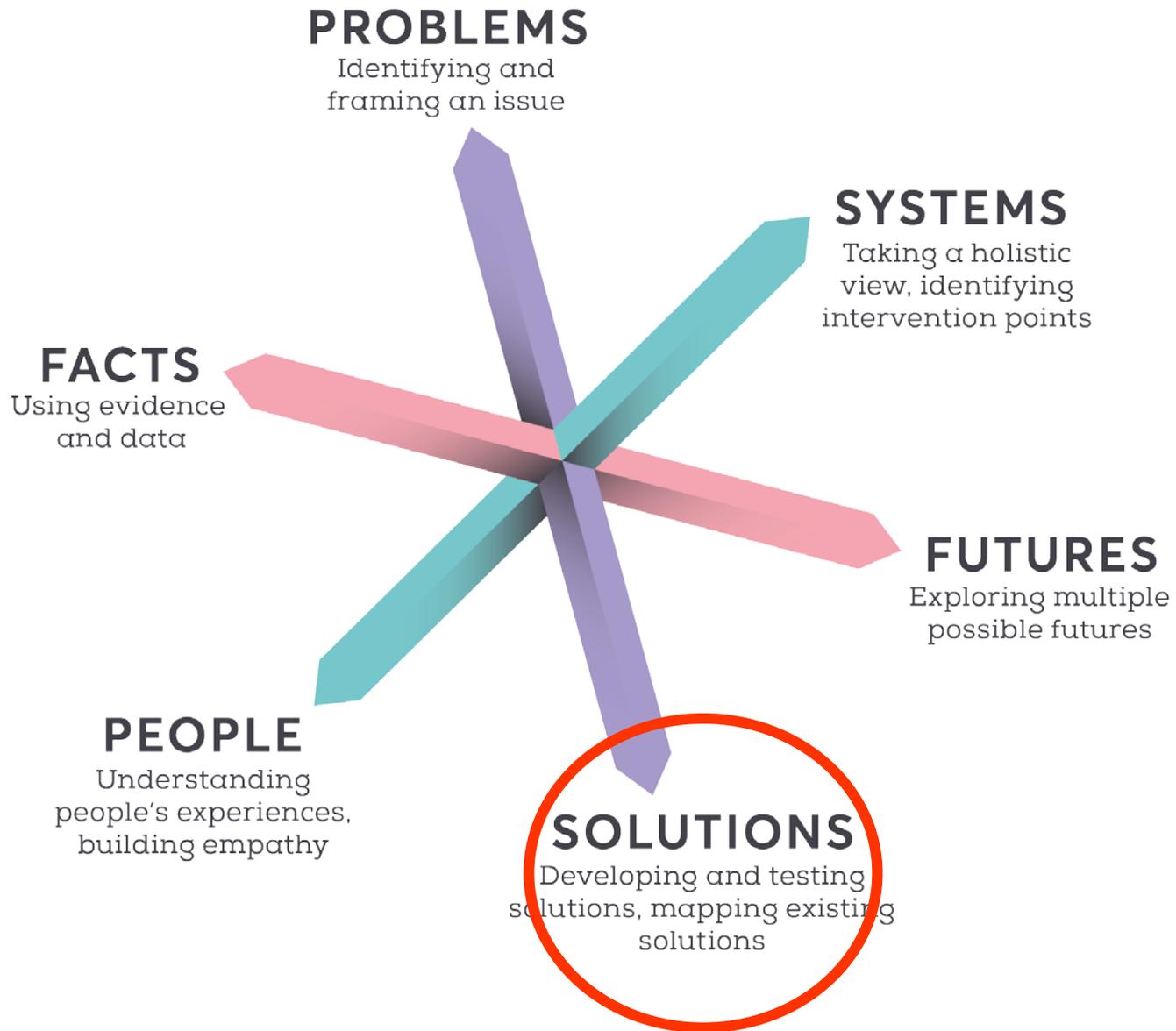
What ideas come to mind?

Develop your plan…

Running an experiment

This tool will help you to plan and evaluate an experiment by articulating your hypothesis, planning how you will collect your data and reflect on the results.

Set up

Issue
What is the issue you are trying to solve? What is the situation you want to change?

Hypothesis
What (repeatable) intervention or action will solve the issue or change the situation? What will the observable or measurable outcome look like? What are you expecting or hoping that will happen?

if…	then…

Plan
How will you set up and run the experiment? Who will be involved? In what context? How are you going to collect data?

Reflection

Results
What data did you collect?

Insights
What did you learn from your experiment? What assumptions have been reinforced or disproved?

Next experiment
What will you do next? What changes do you need to make? What are gaps or assumptions you have to test?

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One method to quickly test ideas is prototyping

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Prototyping is…

Making an idea visual or tangible, so you are able to share and test it with others, in order to learn from it.

For fairly low costs

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Prototyping is a cheap way to learn from failures

PROTOTYPING

BIG BANG IMPLEMENTATION

RESOURCES SPENT
Time, money, talent, materials invested to develop and implement the solution

ROOM FOR FAILURE
Find out what works, and what doesn't

START — PROJECT JOURNEY → END

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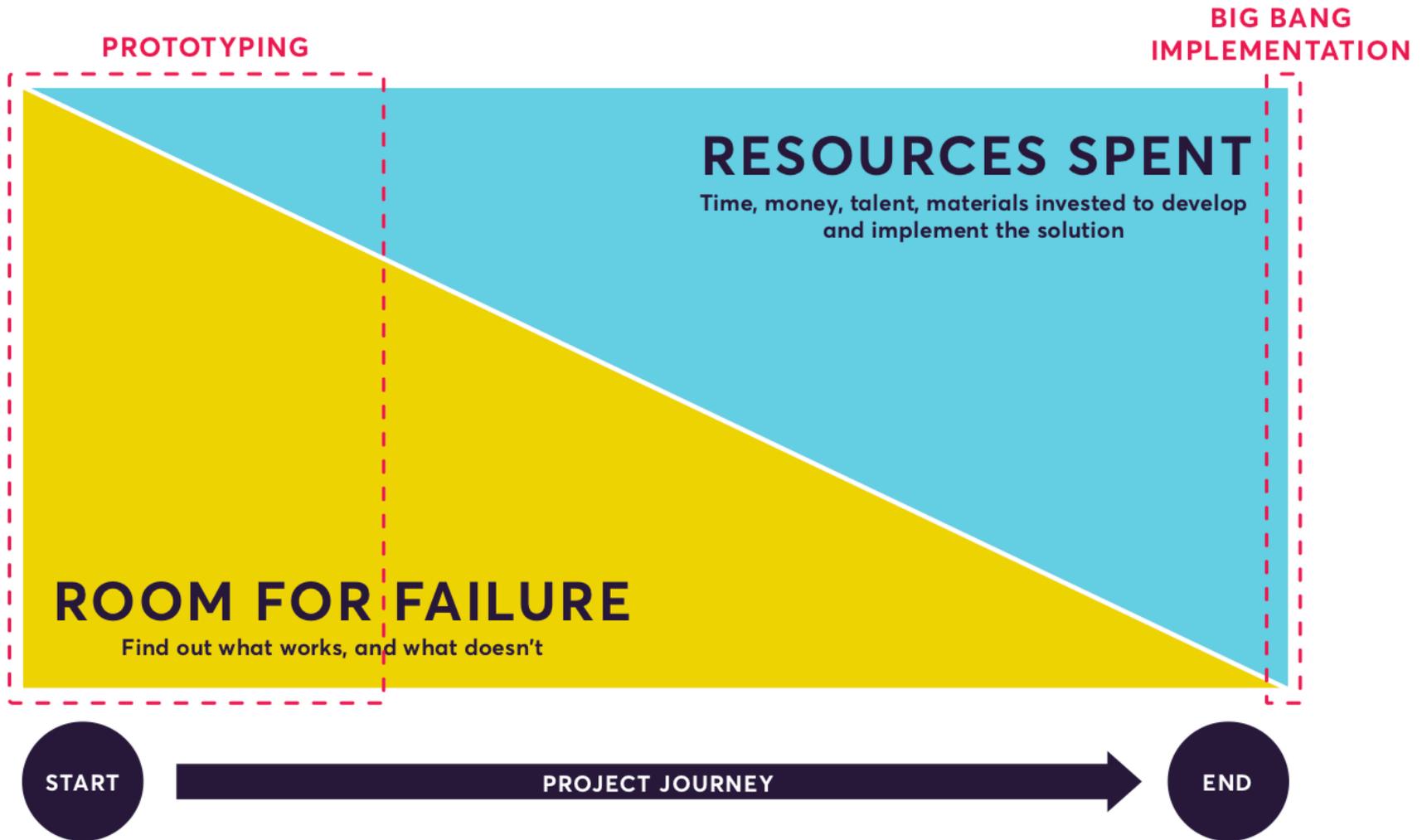
Three approaches

Problem analysis

PROBLEM → SOLUTION

Prototyping

PROBLEM SOLUTION

Solution mapping

PROBLEM ← SOLUTION

STATES OF CHANGE
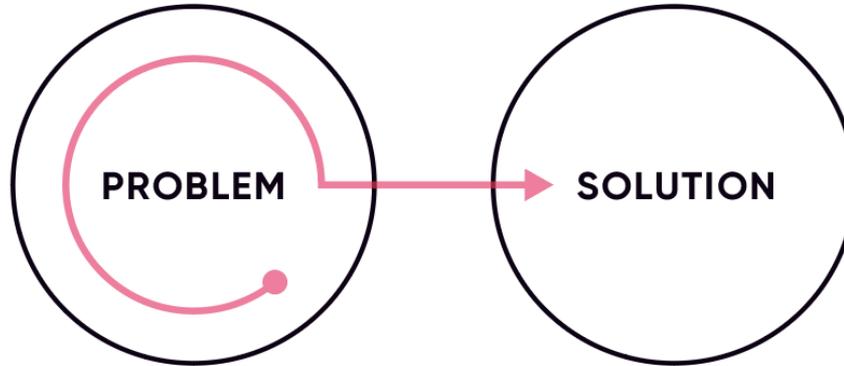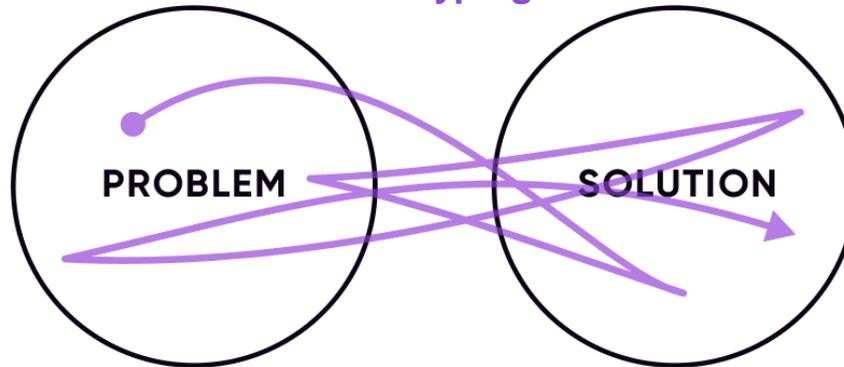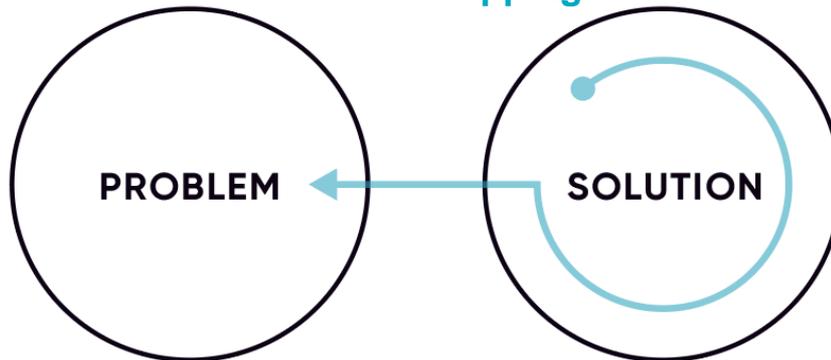
Proof of concept/prototype/pilot/MVP
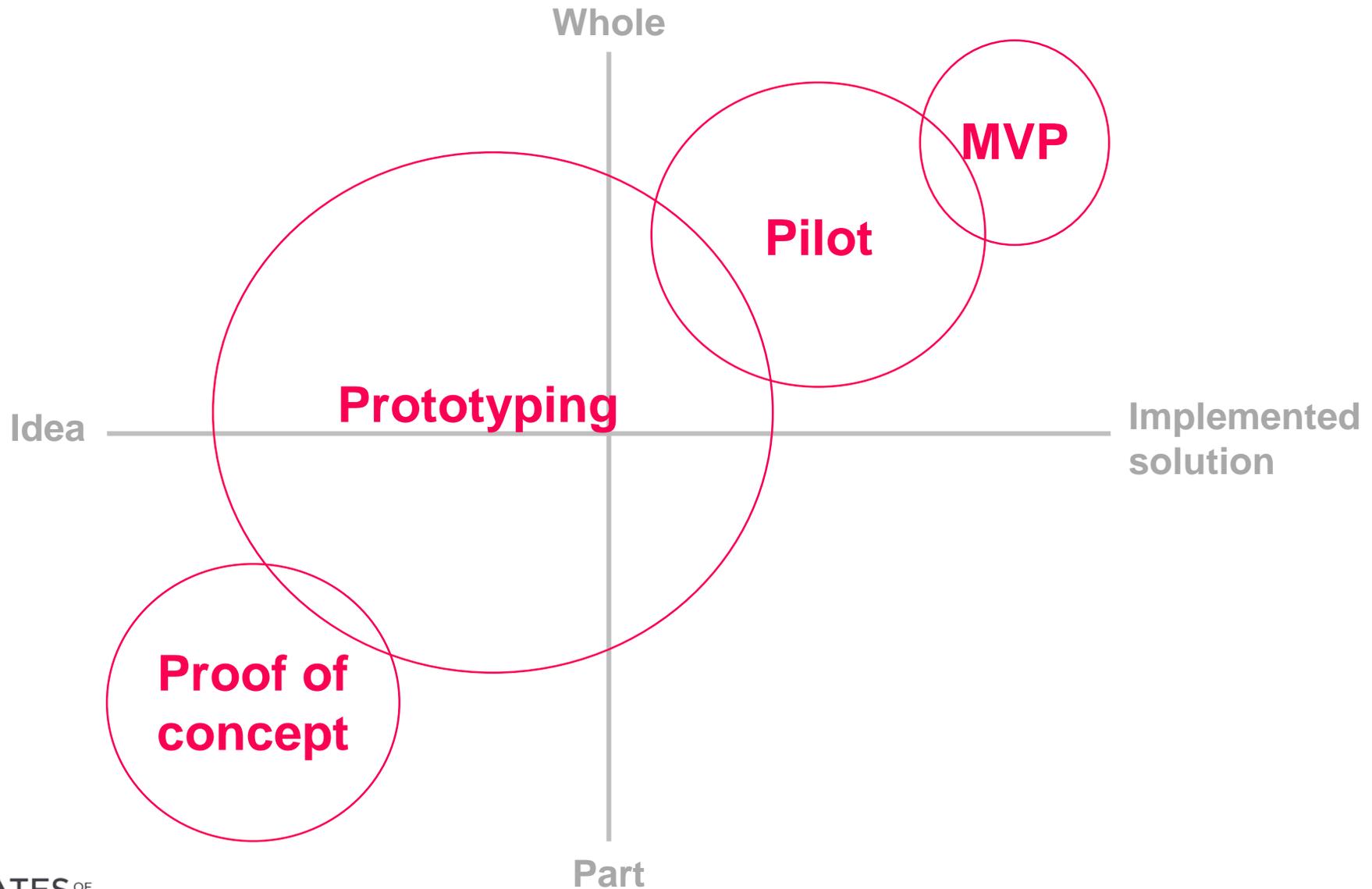
Proof of concept/prototype/pilot/MVP, what's in a name?

	LAB / STUDIO		REAL WORLD	
	Proof of Concept	**Prototype**	**Pilot**	**Minimal Viable Product (MVP)**
What is it?	**Test the feasibility of an idea or assumption to justify further development**	**Test how an idea may work like, look like, feel like to learn from and identify assumptions**	**Testing whether a solution will work in the real context to justify scaling or implementing**	**Testing the viability of essential core of your solution in action.**
Stage	Early stage	Early stage	Roll out	Live testing
Stakeholders involved	Internal stakeholders	Users (respondents), decision makers, sponsors	Real users, decision makers, sponsors	Real users
What do we have?	Having a hunch	Having an idea	Having a solution	Having the core of a solution
What do we have?	You have a hunch and want to test if it is feasible	You have a idea and want to test how it might work and learn from it	You have a solution and want to test how if it actually will work (before implementing it large scale)	You have the core of a solution and want to test if it will work
When is it a success?	When an idea is feasible	When an idea works as anticipated – if that is not the case, it created new insights	When a solution works as anticipated	When a solution works as anticipated, or when it
Duration	A couple of hours or days.	A couple of hours, days or even weeks	Weeks, months	Continuous
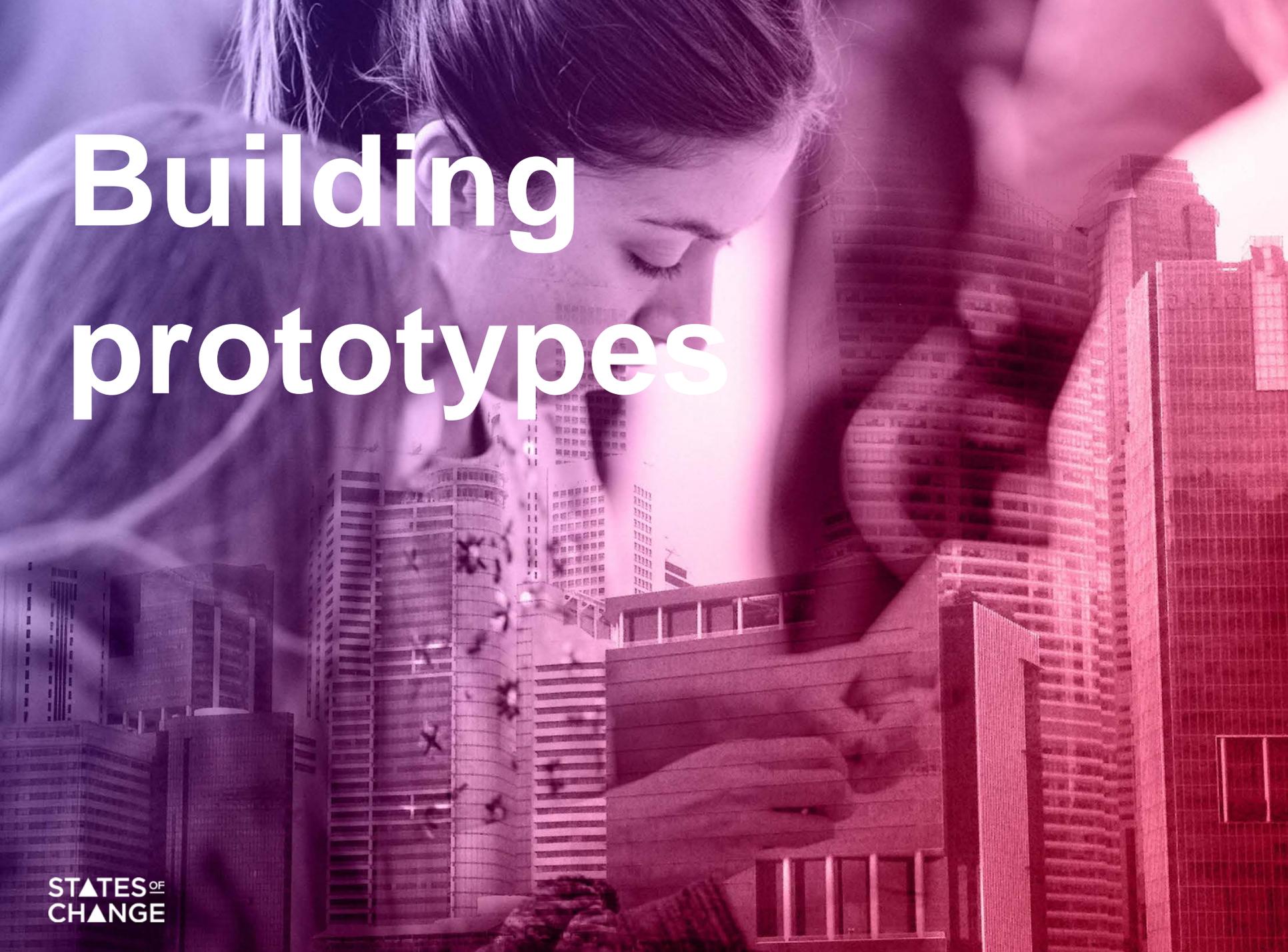
Building prototypes

Prototypes test how something…

LOOKS	**FEELS**	**WORKS**	**BEHAVES**

Prototype method example

Experience Prototype:

LOOKS WORKS

FEELS BEHAVES
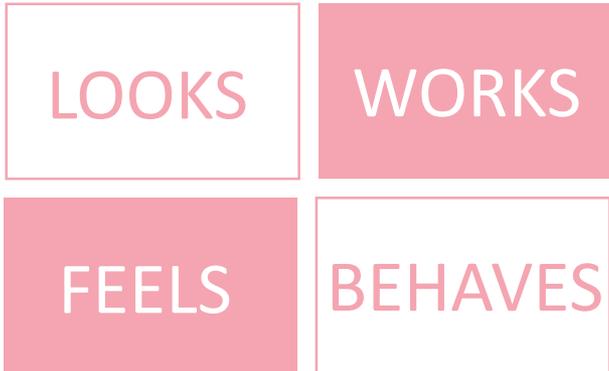
Prototype method example

Wizard of Oz:

LOOKS   WORKS

FEELS   BEHAVES

STATES OF CHANGE
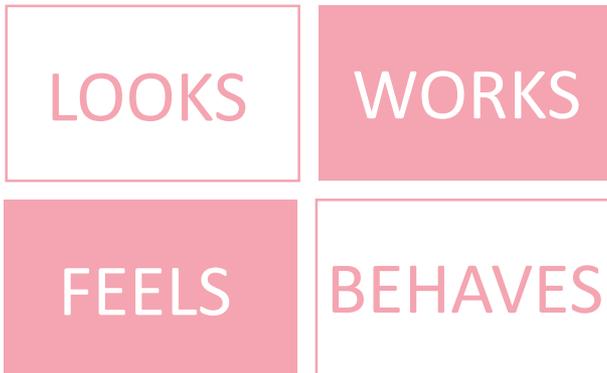
Prototype method example

System mock up:

LOOKS WORKS

FEELS BEHAVES
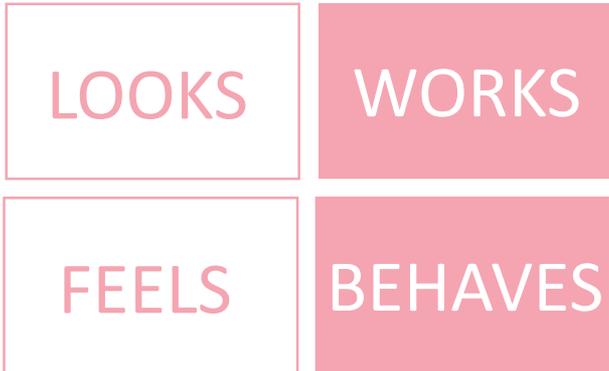
Prototype method example

Paper prototyping:

LOOKS	WORKS
FEELS	BEHAVES
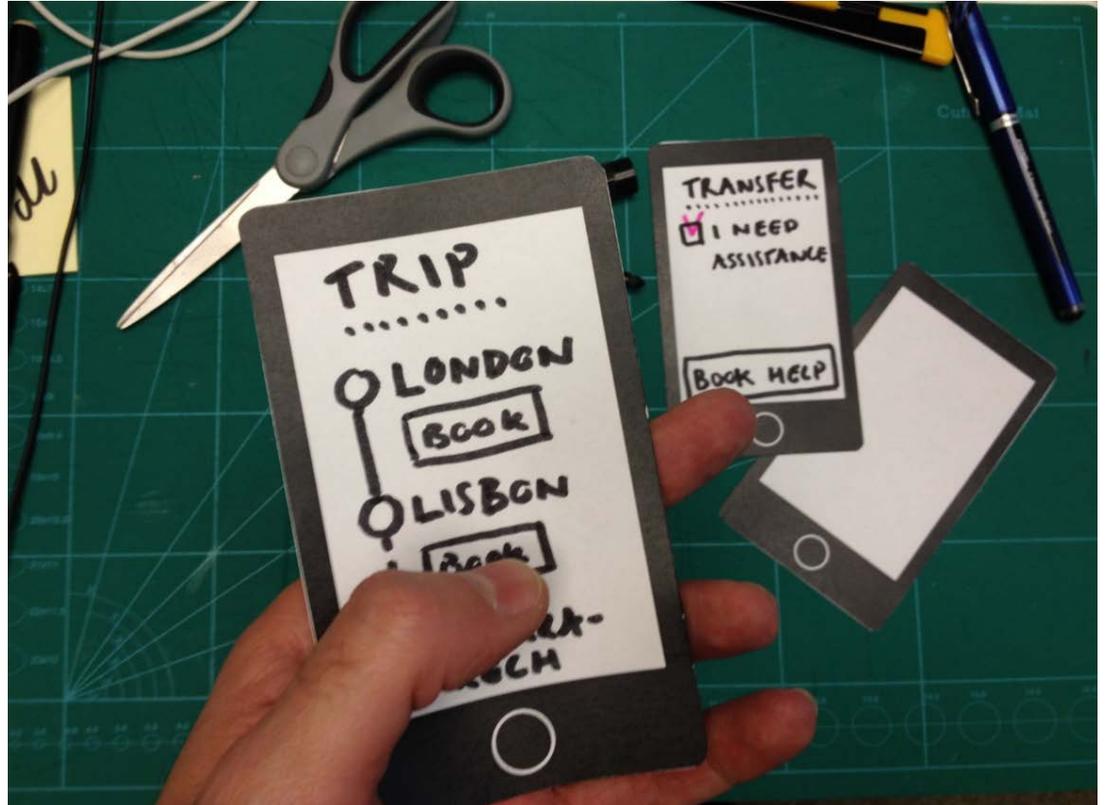
Fidelity

High
fidelity

Clickable
prototype

Paper
prototype

Crude
sketch

Low
fidelity
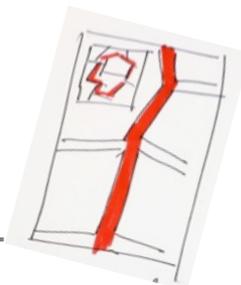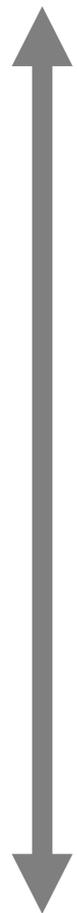
One rule…

Build first, then think/talk!

STATES OF CHANGE

New
competencies

STATES OF
CHANGE

Experimentation poster (handwritten):

EXPERIMENTATION

BEING ABLE TO [MAKING] BETTER DECISIONS BY...

- EXPLORE DIFFERENT OPTIONS / OPPORTUNITIES
- IDENTIFY ASSUMPTIONS AND TRANSLATE THEM INTO A TESTABLE HYPOTHESIS
- SET UP A PROCESS OF TESTING THE POTENTIAL OUTCOMES OF THE HYPOTHESIS ON A SMALL SCALE
- PROTYPE IDEAS FROM CRITICAL INSIGHTS IN ORDER TO LEARN ABOUT THEIR RELEVANCE AND VALIDITY
- BE OPEN TO CHALLENGE ONE'S ASSUMPTIONS ABOUT THE PROBLEM
- BE OPEN TO UNEXPECTED RESULTS (FAILING WHATEVER)
- BEING FLEXIBLE TO ADJUST OR ALTER PLAN/STRATEGY
- BEING ABLE TO SHARE LEARNING WITH HONESTY
- PLAN FOR ITERATIVE LEARNING (BY DOING)

Diagram poster (handwritten circles):

PERMISSION

PROJECT PROBLEM SOLVING

LEARNING

RELATION-SHIPS
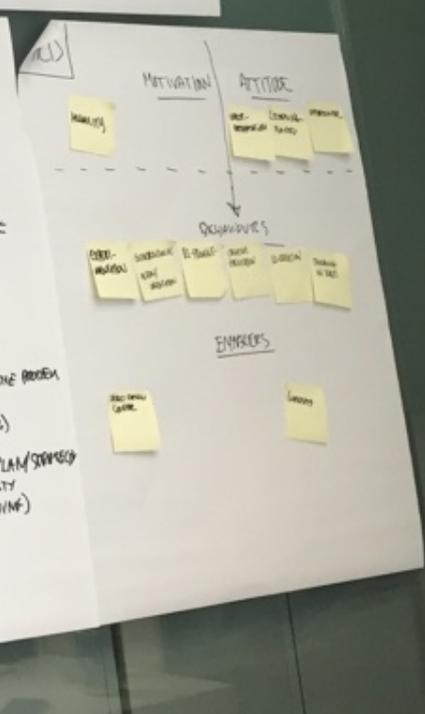
Four levels of capacity building

ECOSYSTEM

ORGANISATION

TEAM

INDIVIDUAL

Citizen & Stakeholder Engagement
Actively involving citizens, stakeholders and unusual suspects

Creative Facilitation
Creatively processing different perspectives and deliberating multiple options

Building Bridges
Orchestrating interaction to find common ground and create shared ownership

Brokering
Mediating contrasting interests and reducing friction between multiple stakeholders

Political & Bureaucratic Awareness
Operating political dynamics and bureaucratic procedures to ensure strategic support

Financing change
Understanding the many ways to liberate and use financial resources for innovation

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Being insurgent and use business acumen to create opportunities

Demonstrating Value
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WORKING TOGETHER
Engaging with citizens and stakeholders to create shared ownership of new solutions

LEADING CHANGE
Mobilising resources and legitimacy to make change happen

ACCELERATING LEARNING
Exploring and iterating new ideas to inform and validate solutions

CORE SKILLS
KEY ATTITUDES

Agile
Responding to changing environments with flexibility

Empathetic
Understanding others' experiences and frames of reference

Action-oriented
Biased towards action and learning by doing

Resilient
The perseverance to deal with resistance

Curious
The desire to explore multiple possibilities

Imaginative
Exploring and envisioning new possible futures

Reflective
Habit of critically reflecting on process and results

Outcomes-focused
Strong commitment to real world effects

Courageous
Willingness to take risks

Competencies for
EXPERIMENTING & PUBLIC PROBLEM SOLVING

Future Acumen
Connecting long-term vision with short-term achievable tasks

Prototyping & Iterating
Testing ideas and systematically improving them

Data Literacy & Evidence
Using different kinds of data effectively to accelerate sense-making

Systems Thinking
Combining micro and macro perspectives to grasp complexity

Tech Literacy
Understanding technological developments and use their potential

Public sector innovators combine key attitudes and skills to successfully drive innovation in government and solve public problems

nesta

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PRAGMATISM

LEADING CHANGE
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Mapping the Team

Summary

Three categories of experimentation

Embrace uncertainty —————————————————————— Manage risk

Imaginative mindset
WHAT IF...?

Analytical mindset
IF...THEN...

SOLUTIONS ARE UNKNOWN
Understanding of the problem is unclear. Risk cannot be managed.

SOLUTIONS ARE KNOWN
Understanding of the problem is clear. Risk can be managed.

EXPLORE
GENERATING HYPOTHESES
What might be

TRIAL-AND-ERROR
ESTABLISHING A HYPOTHESIS
What could be

VALIDATE
VALIDATING A HYPOTHESIS
What should be

Shaping direction
Action is taken to open up new possibilities

Creating basis for redesign
Action is taken to find out what works

Legitimising initiative
Action is taken to justify decision making

SUGGESTED METHODS

Speculative Design, Foresight, Ethnographic Research, Positive Deviance, etc

Prototyping, Human Centred Design, Behavioural Economics, etc

Randomised Control Trials, Pilots, A/B Testing, Multiple Parallel Experiments, etc

STATES OF CHANGE

Landscape of innovation approaches

TALENT SPACE — Empowering people

- Team / Organisational Design
- Experimental Culture
- Experimental Leadership
- Ambidextrous Leadership
- Adaptive Leadership
- Adaptive Management
- Innovation Learning / Pedagogy
- Talent Management
- System Leadership
- Change Management

INTELLIGENCE SPACE — Understanding reality

- Sensemaking
- Collective Intelligence
- Lead User Innovation
- Design Research
- Ethnographic Research
- Evidence-based Policy
- Contextual Inquiry
- Action Research
- Policy Analysis
- Randomised Control Trials
- Foresight
- Critical Design
- Speculative Design
- Futures Analysis
- Data Visualisation
- "Nowcasting"
- Reverse Engineering
- Data Ethnography
- Social Media Analysis
- Citizen Generated Data
- Agent Based Modelling
- Big Data
- Open Data

SOLUTION SPACE — Shaping reality

- Open Innovation
- GovJams / Service Jams
- Innovation Labs / Teams
- Citizen Engagement
- Challenges & Prizes
- Co-creation
- Reality labs
- Democratic Dialogue
- Regulatory Sandboxes
- Positive Deviance
- Open Policy Making
- Accelerators
- Social Innovation Camps
- (Community) Asset Mapping
- Transdisciplinary Design
- Frugal Innovation
- Jugaad
- Minimal Viable Product (MVP)
- Systems Thinking
- Systemic Design
- Design Thinking
- Transition Design
- Reverse Innovation
- Human Centered Design
- Behavioural Insights
- Riskiest Assumption Testing
- Lean Startup
- Living Labs
- Service Design
- Gamification
- Design Sprint
- Prototyping
- Impact Investment
- User Experience Design
- Open Design
- Alternative Finance
- Digital Transformation
- Innovation/Creative Spaces
- Social Innovation Camps
- Crowdfunding
- FabLabs
- Hackathons
- Crypto Currencies

TECHNOLOGY SPACE — Enabling action

- Augmented Reality
- Virtual Reality
- Digital Social Innovation
- Smart Cities
- Artificial Intelligence / Machine Learning
- Algorithmic Governance
- Internet of Things
- Sensors
- Open Source
- Blockchain

STATES OF CHANGE

Six principles to explore the unobvious

PROBLEMS
Identifying and framing an issue

SYSTEMS
Taking a holistic view, identifying intervention points

FACTS
Using evidence and data

FUTURES
Exploring multiple possible futures

PEOPLE
Understanding people's experiences, building empathy

SOLUTIONS
Developing and testing solutions, mapping existing solutions

STATES OF CHANGE

What do we know?

(Validated) knowledge	Assumptions	Knowledge gaps

What do you know for sure?
For which you have evidence to support your claims

What do you think you know for sure?
But, for which you don't have any evidence to support your claims

What is it that you don't know?
For which you need to do research

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Q&A

STATES OF CHANGE

Thank you!

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@nesta_uk
@bcaffin

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