How to frame a good problem?
Addressing the initial step for impactful innovation

Dr Amandine Robin

ASEW 5th edition – 18th August 2023

Amandine Robin

Innovation strategist | Design thinker
Founder and Managing Director at MATTERS

PhD in Applied Mathematics, Amandine Robin is a multidisciplinary innovation strategist, with a unique blend of expertise combining innovation and research, entrepreneurship and academy, analytic rigour and creativity.

Amandine likes to bring people from seemingly disconnected disciplines together to design cutting-edge products with attention to detail, relevance and sustainability of the end-result.

Why framing a problem well is a crucial step?

Framing a good problem is the foundation upon which the entire innovation process is built.

A good problem statement:
- Defines the boundaries of what needs to be solved.
- Clarifies the objectives: shared understanding, precise goals
- Prepares well for creativity by providing a clear starting point
- Identifies root causes (not just address the symptoms)
- Opens up exploration and mitigates solution bias
- Allows for a proper evaluation/assessment of potential solutions.

Without a well-defined problem, the resulting solutions may lack direction, fail to address the true underlying issues, and ultimately **fall short of creating meaningful and sustainable impact.**
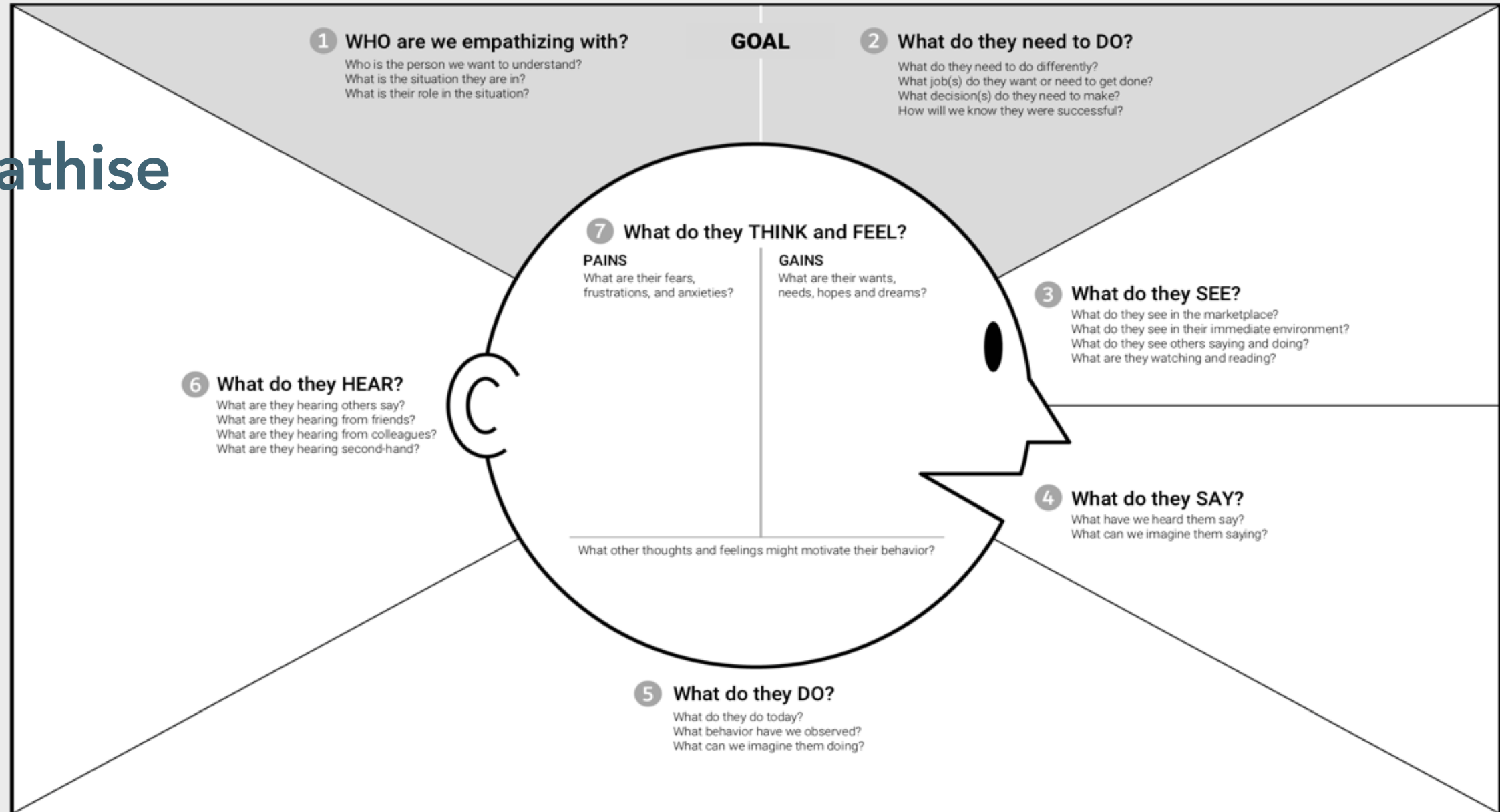
MATTERS
A STRATEGIC INNOVATION LAB

Empathy Map Canvas

Empathise

GOAL

1 WHO are we empathizing with?
Who is the person we want to understand?
What is the situation they are in?
What is their role in the situation?

2 What do they need to DO?
What do they need to do differently?
What job(s) do they want or need to get done?
What decision(s) do they need to make?
How will we know they were successful?

7 What do they THINK and FEEL?

PAINS
What are their fears,
frustrations, and anxieties?

GAINS
What are their wants,
needs, hopes and dreams?

3 What do they SEE?
What do they see in the marketplace?
What do they see in their immediate environment?
What do they see others saying and doing?
What are they watching and reading?

6 What do they HEAR?
What are they hearing others say?
What are they hearing from friends?
What are they hearing from colleagues?
What are they hearing second-hand?

What other thoughts and feelings might motivate their behavior?

4 What do they SAY?
What have we heard them say?
What can we imagine them saying?

5 What do they DO?
What do they do today?
What behavior have we observed?
What can we imagine them doing?

Individual activity:

Reflect on your own venture and the problem (or sub-problem) you are addressing.
Write your problem statement

MATTERS
A STRATEGIC INNOVATION LAB

Evaluate it against your checklist of a good problem statement

Attributes of a good problem statement checklist:

- It states the context.
- It focuses on the people affected by the challenge (Design Thinking).
- It captures why it matters to the people.
- It's solution-free.
- It's neither too narrow, nor too broad.

MATTERS
A STRATEGIC INNOVATION LAB

Useful techniques

Immersion: Interviews, research.
Look at the problem from different perspectives

The 5 "W"s: Get pertinent information out

The 5 WHY's: Get to the root of the problem

Frame the problem from another's point of view: Personas, Extreme users, The Martian

Take the problem's counterpart: Worst case scenarios, the angel's advocate

Any method is good as long as it diverges!

MATTERS
A STRATEGIC INNOVATION LAB

The 5 "W"s

Principle:
Ask Who, What, When, Where, Why:

Who does the problem affect?
What are the boundaries? What is the impact of the issue?
When does the issue occur? When does it need to be fixed?
Where is the issue occurring?
Why is it important that we fix the problem?

MATTERS
A STRATEGIC INNOVATION LAB

The 5 Why's

Principle:
Ask WHY to the goal expressed, and WHY to each answer given.

Irritating? But efficient to reveal the missed aspects or the hidden objectives.

Identify the true objective.

Explore the cause and effect relationships
Determine the root cause of a problem

MATTERS
A STRATEGIC INNOVATION LAB

The Angel's advocate

The angel's advocate consists in **changing the representation one has of a result**. It requires a lot of mental flexibility and practice and then becomes very simple.

In life, there is **no objective success or failure**! It's actually just a representation of reality, results that we interpret in a more or less positive manner. This interpretation is just a way to look at things!

One can also think of failure as an unexpected result which brings us to reconsider our representation and be delighted about it.

**Mental flexibility – Mental preparation
Put a situation into perspective**

MATTERS
A STRATEGIC INNOVATION LAB

The Angel's advocate

"I failed matric!"

- I'll be majoring next year!
- I'll learn faster so I'll have more time for sport, music or social life…
- Because exams work with quota, I left a space for someone else who might need it more than me
- When I'll be 60yo, what importance will it make to have passed matric 42 or 41 years ago?

Identifies the hidden variables in each situation, implicit assumptions, and to rebuild an environment where failure becomes an asset

MATTERS
A STRATEGIC INNOVATION LAB

The Martian

Frame the problem from another's point of view

The Martian has no idea of human behaviour and organisation, anything that belongs to the Earth is foreign to him: he doesn't know what a man is, why he gets dressed, how he lives, if he has a boss, …

BUT he is capable to be surprised by what he sees so he asks questions! Crucial to move away from dominant representation…

Before trying to solve a problem, it's fun and useful to ask a participant to forget all he knows and ask any question that comes to his mind.

Reveals contradictions or implicit assumptions
Helps moving away from the most obvious

MATTERS
A STRATEGIC INNOVATION LAB

Write it as a question

Template: Challenge Statement
Please complete each of these statements to form your *challenge statement*.

Given that [context] ....
....
....

How might we help [design population]
....

do/be/achieve/feel/improve/… [immediate goal]
 ....
....

so they can [deeper/emotional goal]
....
....

More templates to help you capture and scope your problem precisely

Who are the stakeholders impacted?

Stakeholder/User #1	Stakeholder/User #2	Stakeholder/User #3
Name _____	Name _____	Name _____
What is their current point of view? How will their behavior or actions need to be different in order to address my challenge?	What is their current point of view? How will their behavior or actions need to be different in order to address my challenge?	What is their current point of view? How will their behavior or actions need to be different in order to address my challenge?
What am I curious about related to this stakeholder?	What am I curious about related to this stakeholder?	What am I curious about related to this stakeholder?
How can I develop empathy for this stakeholder?	How can I develop empathy for this stakeholder?	How can I develop empathy for this stakeholder?

Empathy Map Canvas

GOAL

1 WHO are we empathizing with?
Who is the person we want to understand?
What is the situation they are in?
What is their role in the situation?

2 What do they need to DO?
What do they need to do differently?
What job(s) do they want or need to get done?
What decision(s) do they need to make?
How will we know they were successful?

7 What do they THINK and FEEL?

PAINS
What are their fears,
frustrations, and anxieties?

GAINS
What are their wants,
needs, hopes and dreams?

3 What do they SEE?
What do they see in the marketplace?
What do they see in their immediate environment?
What do they see others saying and doing?
What are they watching and reading?

6 What do they HEAR?
What are they hearing others say?
What are they hearing from friends?
What are they hearing from colleagues?
What are they hearing second-hand?

What other thoughts and feelings might motivate their behavior?

4 What do they SAY?
What have we heard them say?
What can we imagine them saying?

5 What do they DO?
What do they do today?
What behavior have we observed?
What can we imagine them doing?

TOOL
PERSONA TEMPLATE

max 30 minutes per persona

A persona is a fictional profile that represents an audience (a user, client, citizen, stakeholder, the press, investor, etc.). Personas can be a great reference for the development of new products or services, actions and communications, giving your entire team a clearer audience profile.

WHAT IT'S FOR
- » Clarifying your ideas about and relationships with your audiences.
- » Personalising your audiences and giving them a presence in your thinking and planning.

HOW TO USE IT
- » Do research into your different audiences.
- » For each segment, create a fictional (!) persona, one person who is a good representative of the group.
- » Categorise them into primary and secondary audiences.
- » Keep it simple. Work with a maximum of three to five personas.
- » Make them real and compelling. Avoid clichés. Use a photo (of someone you don't know) that fits the profile and brings the fictional persona to life.

NAME + AGE	Gazal Abedini, 31
LIVES IN	London
PRIVATE LIFE	Single, social life revolves around girlfriends, running, books, music and dating

PROFESSIONAL EXPERIENCE

Job title

Freelance writer

Organisation

Writes for Fast Company, WIRED, Yahoo & others

Other experiences (past jobs, volunteer work)

Course on coding for journalists
Tried to be an independent fiction writer

Educational background

BA in creative writing

ACTIVITY & BEHAVIOUR

Generation which...

is in and out of freelance jobs and works in highly competitive environments

His/her role model is...

Rob Walker, writer with brilliant column in the NY Times

A well-known emotion

Frustration at the pace of work and abstraction of working online

Geographical orientation

Combination of tech plus social good hubs from San Francisco to Nairobi & Mumbai

NEEDS

Pains

Stories of new tech applications are a dime a dozen. She wants something new

Gains

We offer an opportunity to do an exclusive report on a tech event for kids across the world

Information needs

Why now? Why does this matter? Who's behind it? Photos, quotes, video material

QUOTE

Something you would hear him/her say

'I get over fifty mails with story proposals a day from people I don't know. They're all a mile long. I don't even open them.'
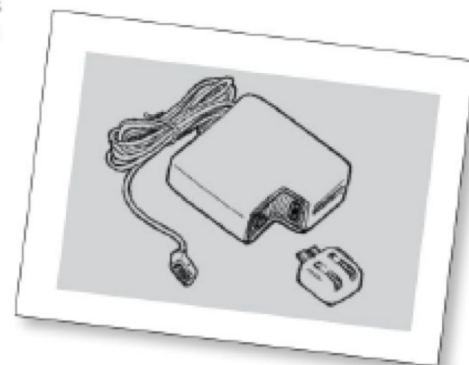
SOCIAL & TECH

Tech literacy level

High! Can code and very familiar with online, interaction, devices. First adopter

Hardware

Fairphone, Fitbit

Social media

Twitter, reddit

INTERACTIONS

Places

Coffeeshop with wifi

Events

SXSW, coding Meetups for journalists

Communication channels

Email, WhatsApp, Facebook messenger
Instagram for private use, Twitter for professional use
Bigtime Dropbox user