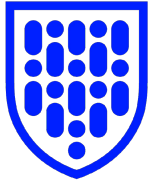2025

Software Engineering

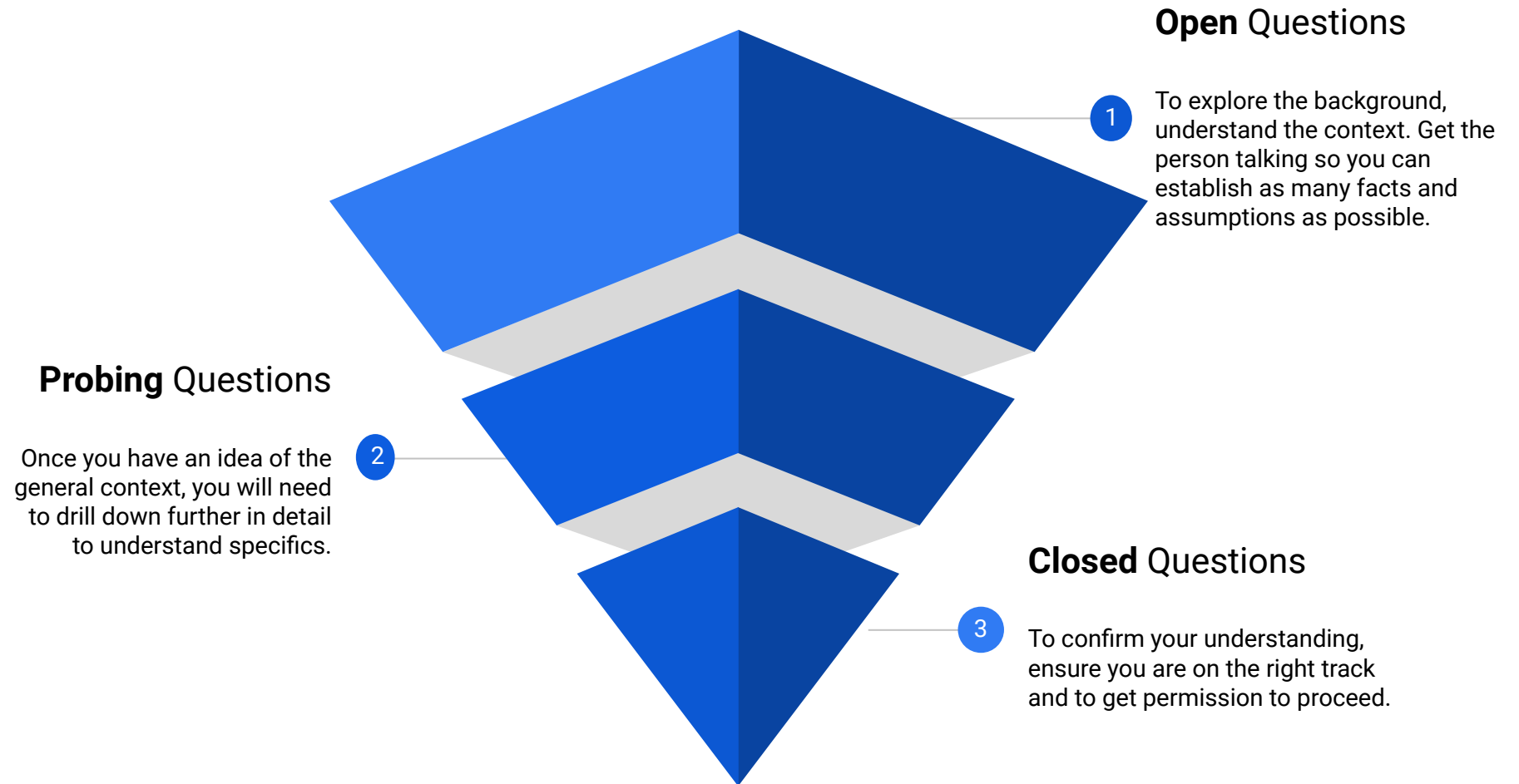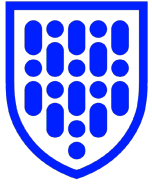## Questioning Techniques
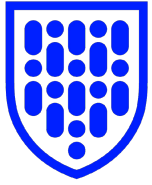
Your Objective - Three D's

- **D**efine the problem/opportunity

- **D**esign the solution

- **D**eliver the results

# Defining the Problem, Opportunity or Challenge

Institute of **Data**

Open Questions

1 To explore the background, understand the context. Get the person talking so you can establish as many facts and assumptions as possible.

Probing Questions

2 Once you have an idea of the general context, you will need to drill down further in detail to understand specifics.

Closed Questions

3 To confirm your understanding, ensure you are on the right track and to get permission to proceed.

Open Questions - TED

Tell, Explain, Describe

- "**T**ell me about…"

- "**E**xplain the way that …"

- "**D**escribe the situation for me…"

- Good for exploring customer needs
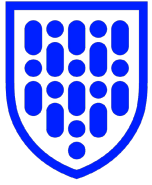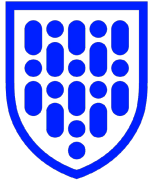
Probing Questions

What, When, Why, Where, How

- Dig deeper into a specific area

- Respond to an answer and ask a probing question to get more information

- "Oh I see… so, when was the last time that happened? How many times did that happen last week? Why do you think that might be happening? What are the possibilities? How did it come to your attention?"
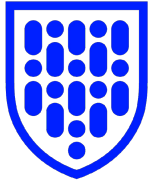
CAUTION - "Why" is very powerful

- Be very careful about how you use the question Why

- In every culture, the question why is often received or considered as an accusation 1

- Remove ego and personality from the question, consider the culture of the organisation, the person you are speaking with and their role

**1 Chris Voss 2016, Random House Books, Never Split the Difference**

Why? - The Super Probing Question

- **5x Whys[1] - Invented by Sakichi Toyoda AKA Root Cause Analysis**

- The vehicle will not start. (the problem)

- **Why?** - The battery is dead. (First why)

- **Why?** - The alternator is not functioning. (Second why)

- **Why?** - The alternator belt has broken. (Third why)

- **Why?** - The alternator belt was well beyond its useful service life and not replaced. (Fourth why)

- **Why?** - The vehicle was not maintained according to the recommended service schedule. (Fifth why, a root cause)

1 https://en.wikipedia.org/wiki/5_Whys
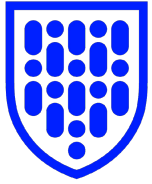
Closed Questions

- Generate a yes or no answer

- Good for getting a definite and easily measurable response

- Can be used for confirmation or to 'trial close'

- Is that correct? Would you like to provide a demo? Do you want me to work on a design or a plan?
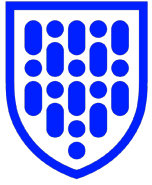
Active Listening - Three A's

Attention, Attitude, Adjustment

- **Attention** - check you are giving your full attention and you are not distracted

- **Attitude** - check your attitude is correct (positive and open minded)

- **Adjustment** - be prepared to go on a journey and adapt as you go
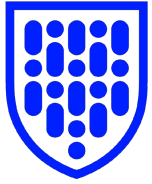
Example Role Play

- Requirements Gathering Scenario

Client owns an exclusive restaurant and wants to add a calendar feature to their website to show which days still have availability for reservations, which needs to integrate with their existing booking system database.

Choose/assign roles (depending on group size) for:
- client
- project manager
- UI designer
- technical developer
- scribe/secretary

Using Open questions to determine scope, Probing questions to define functionality, and Closed questions to verify understanding, create a set of requirements for this new feature.