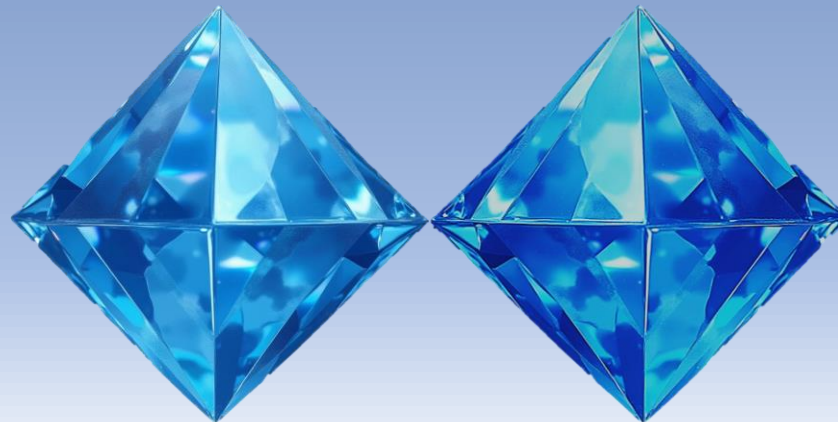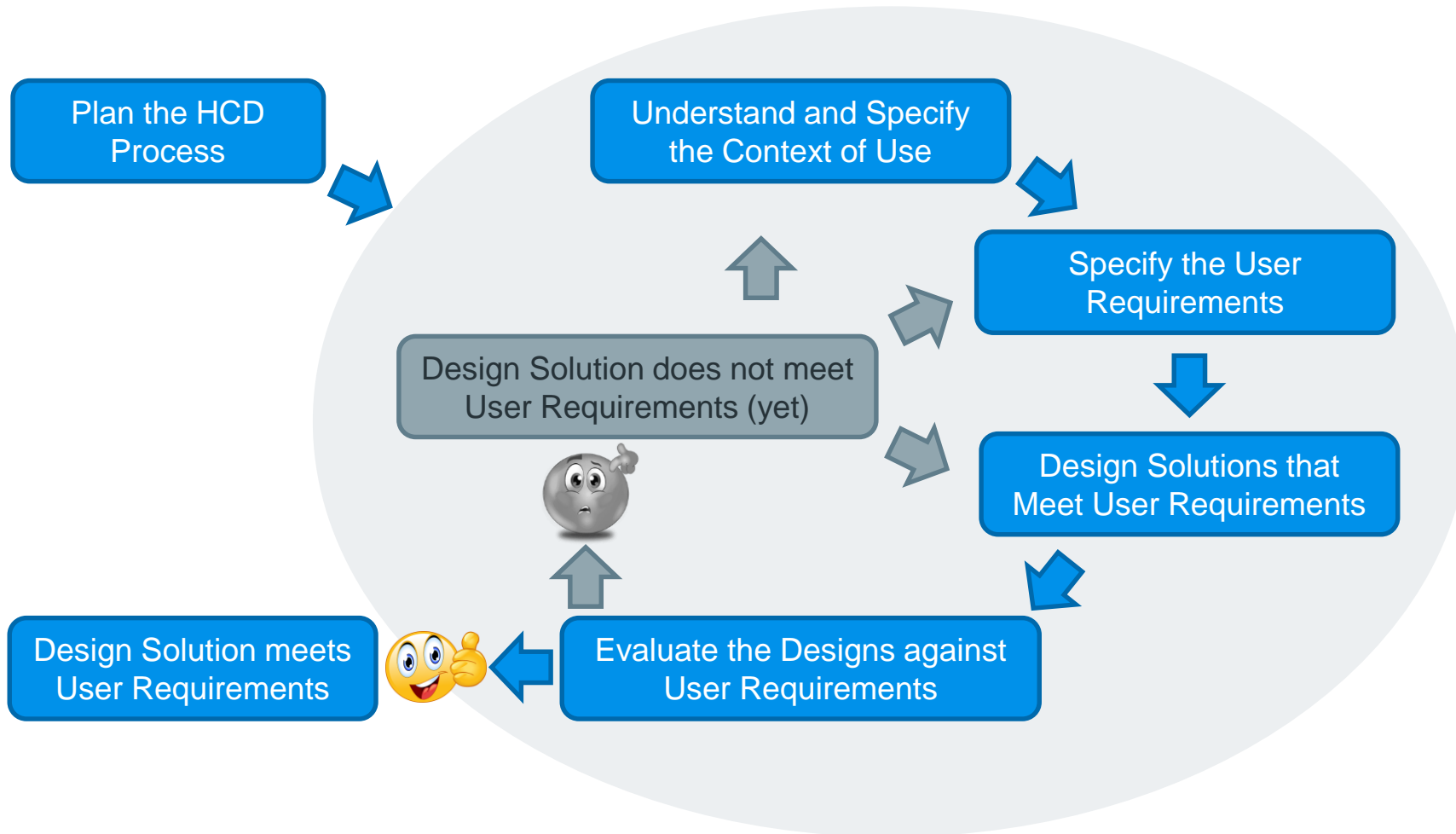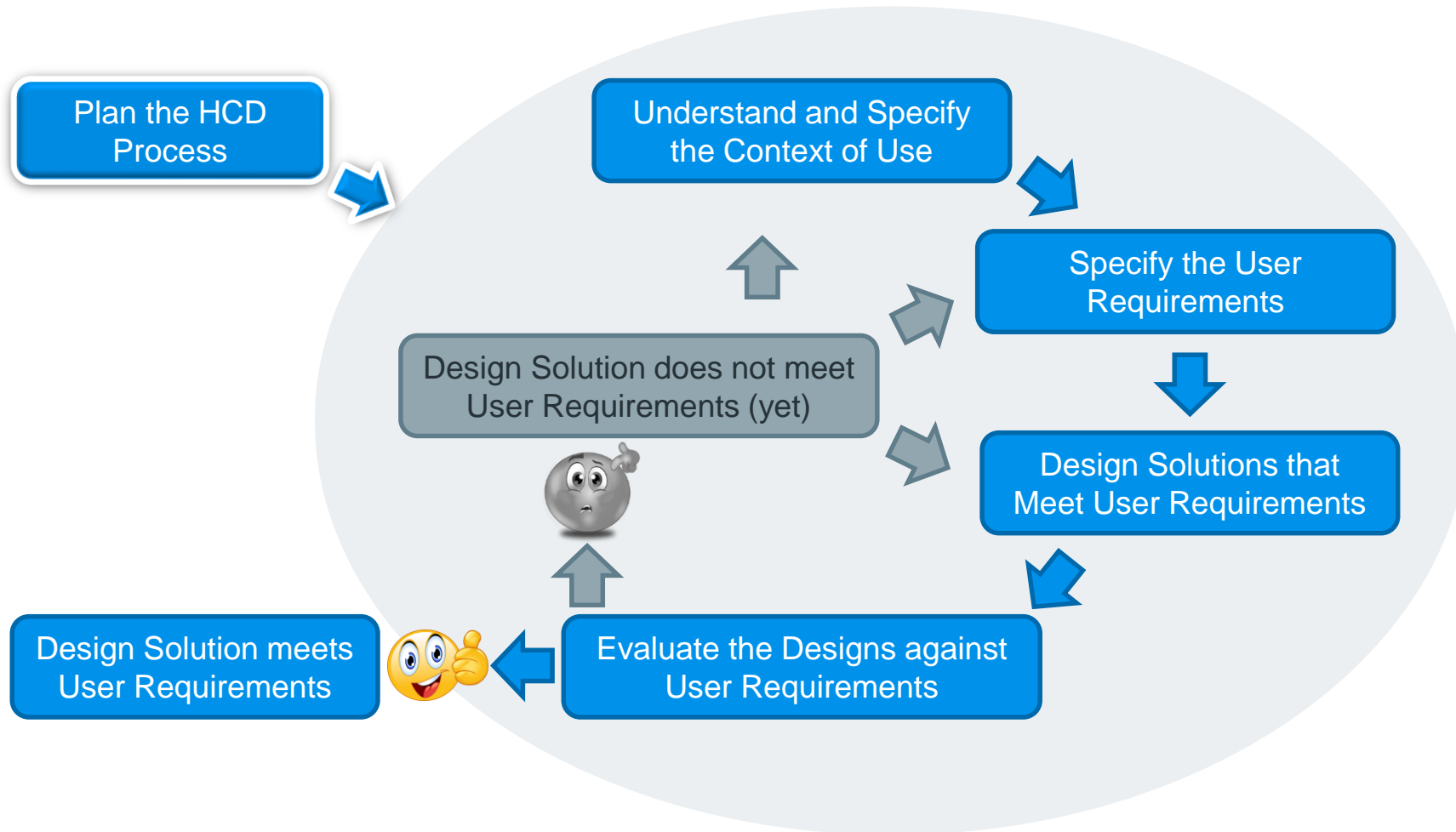# Building Applications with Purpose:

# Bridging
# Human-Centered Design and
# Human-Centered Artificial Intelligence
# in Legal Tech
# with the Double Diamond



Sabine Wehnert  **Linked**in

# Human-Centered Design

Plan the HCD Process

Understand and Specify the Context of Use

Specify the User Requirements

Design Solution does not meet User Requirements (yet)

Design Solutions that Meet User Requirements

Design Solution meets User Requirements
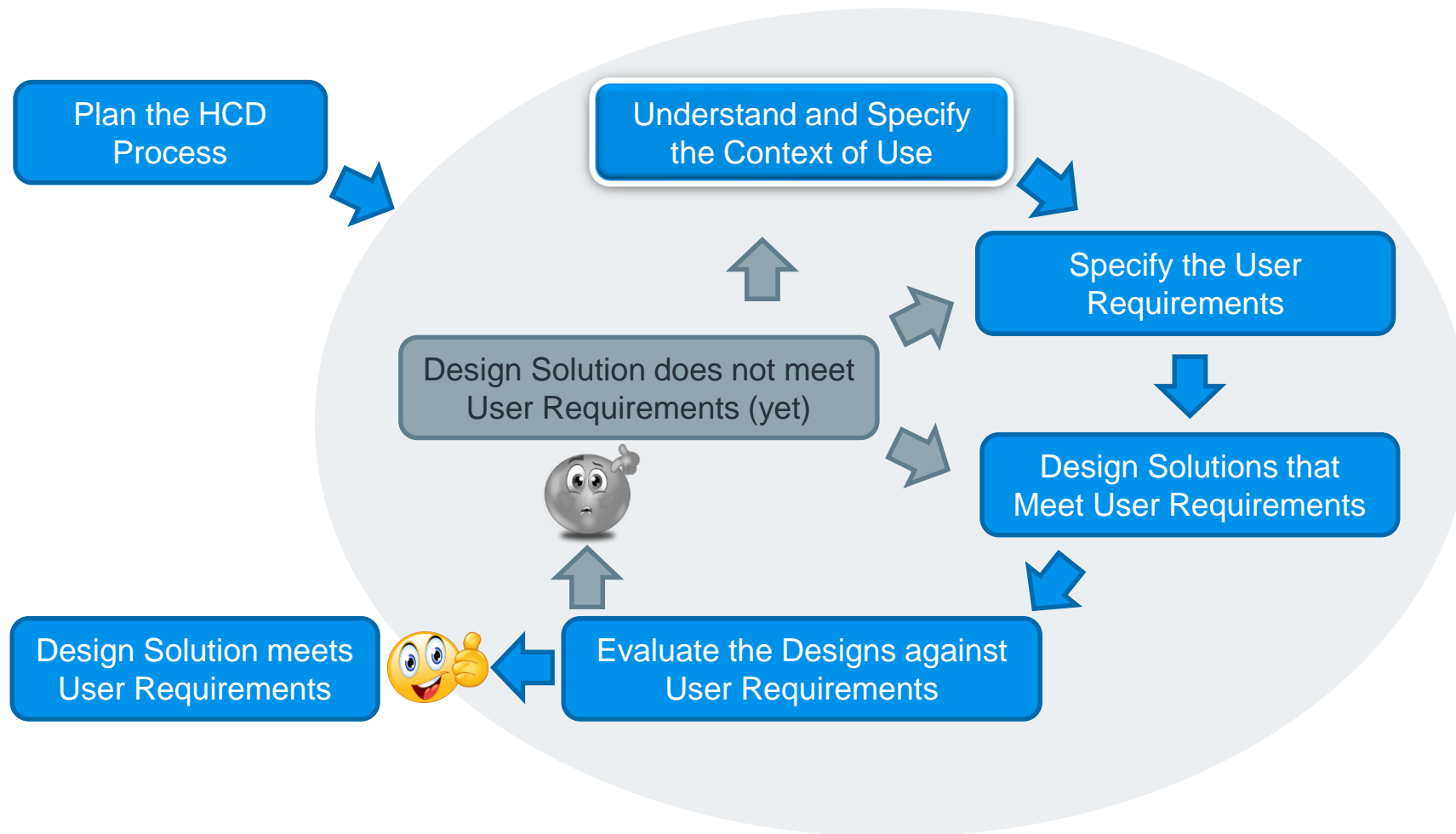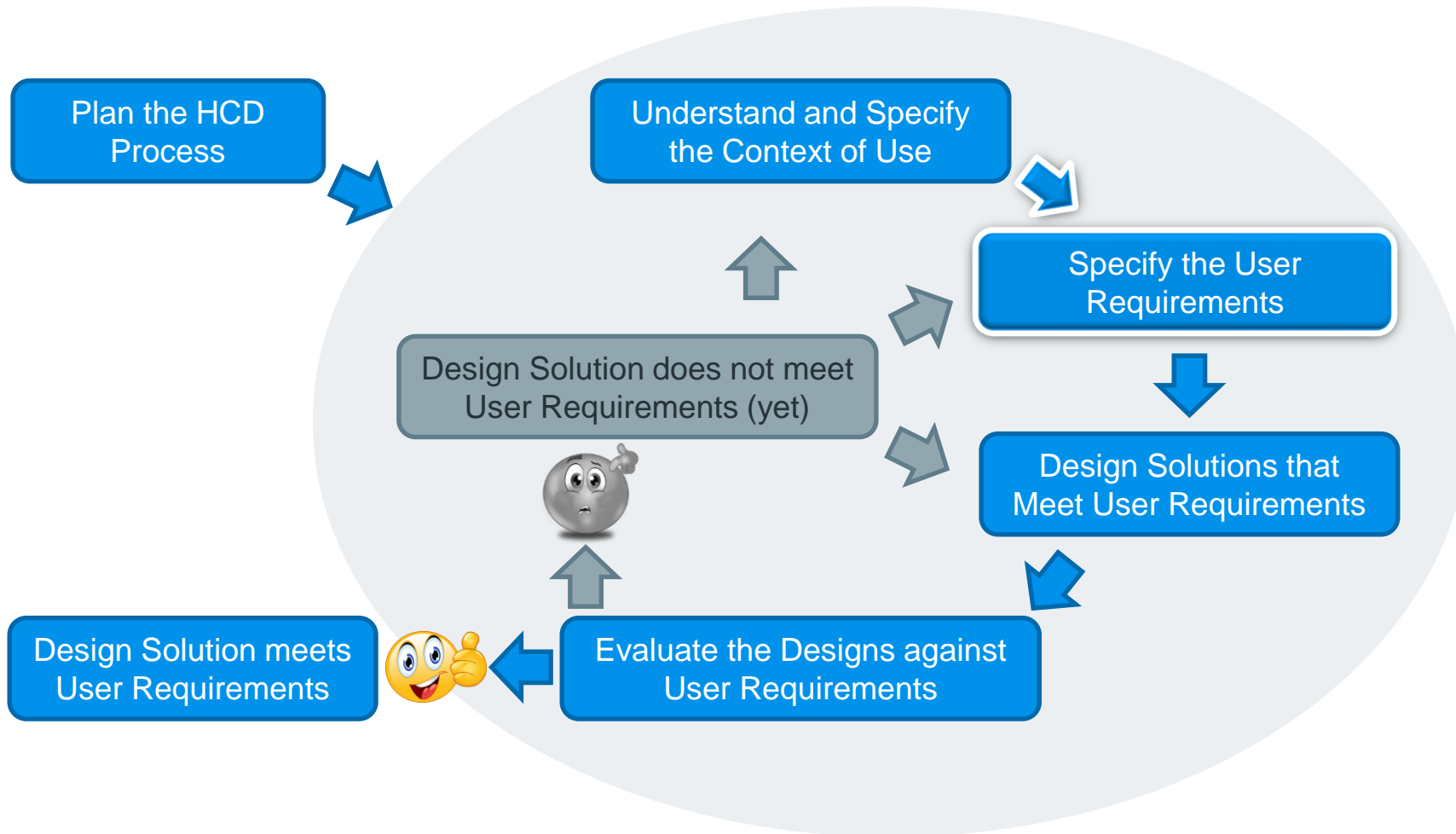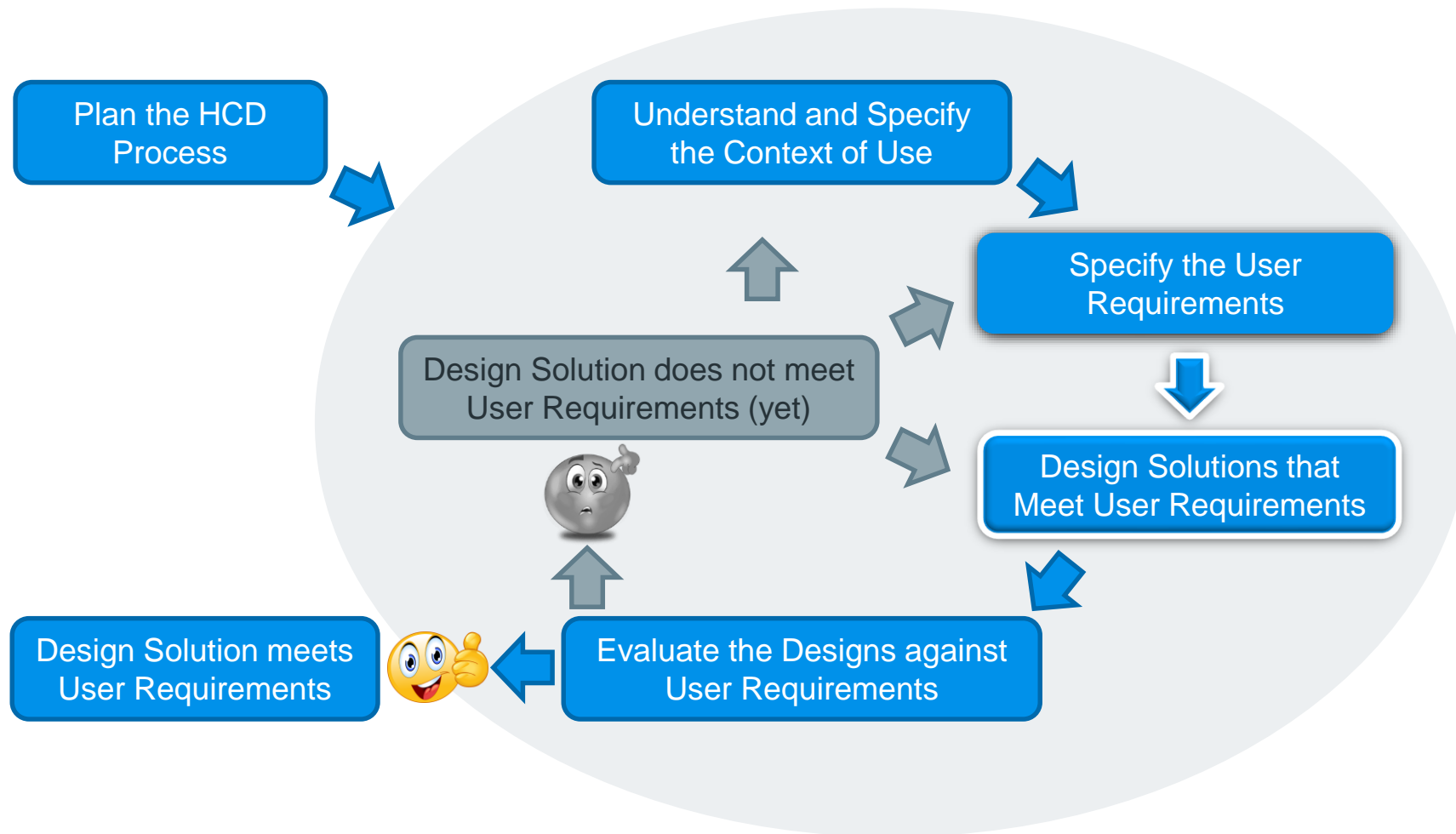
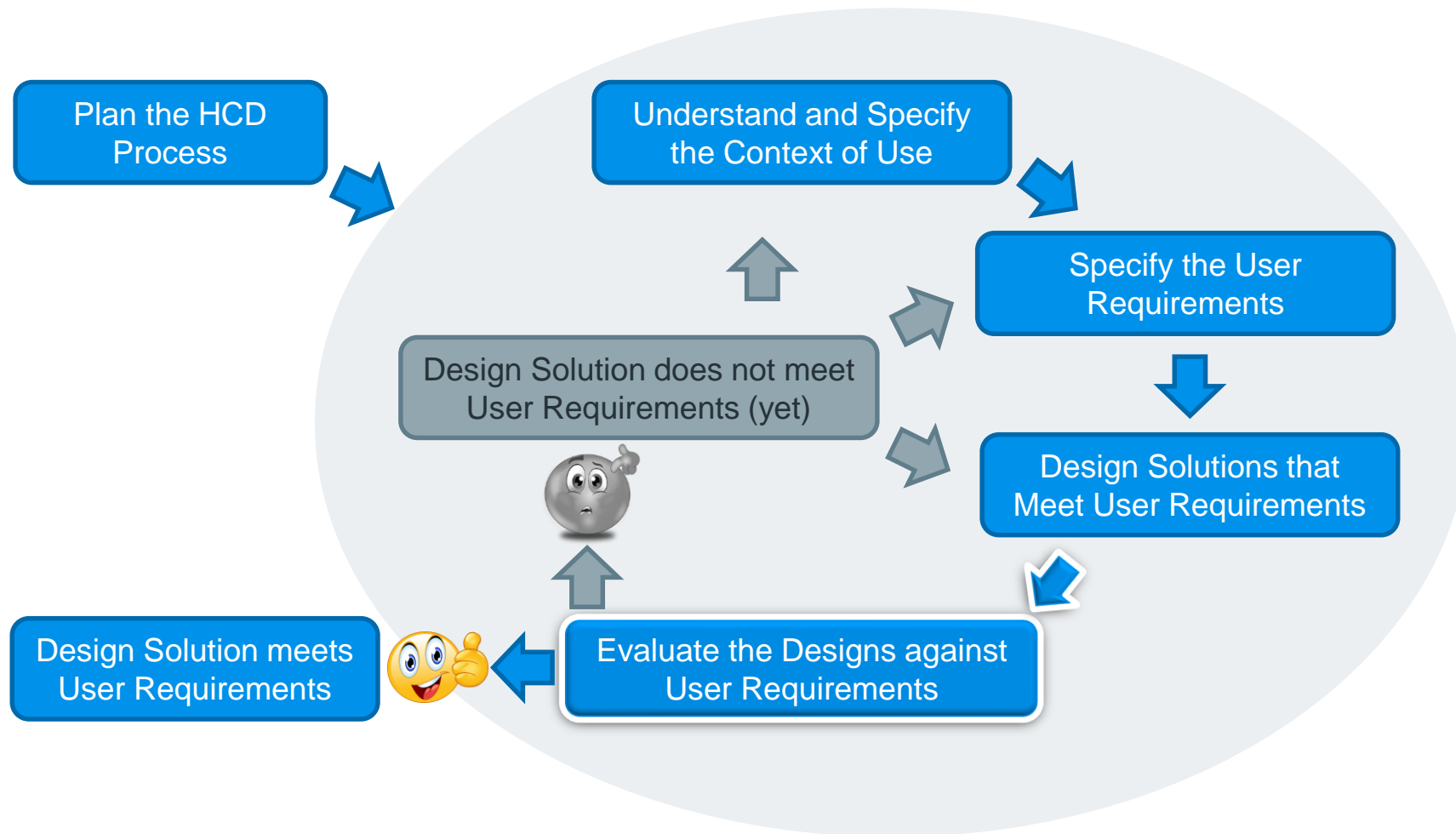Evaluate the Designs against User Requirements

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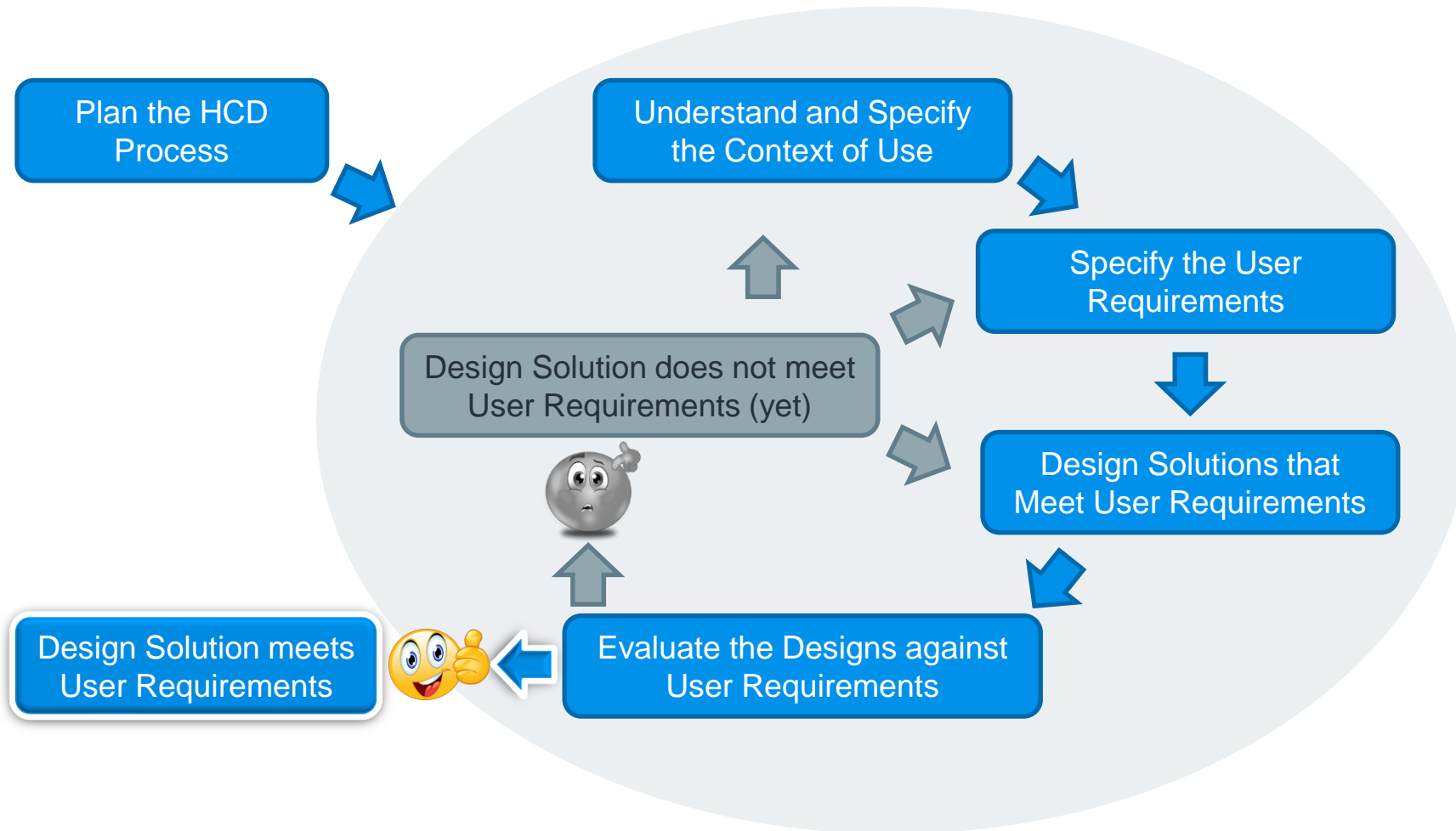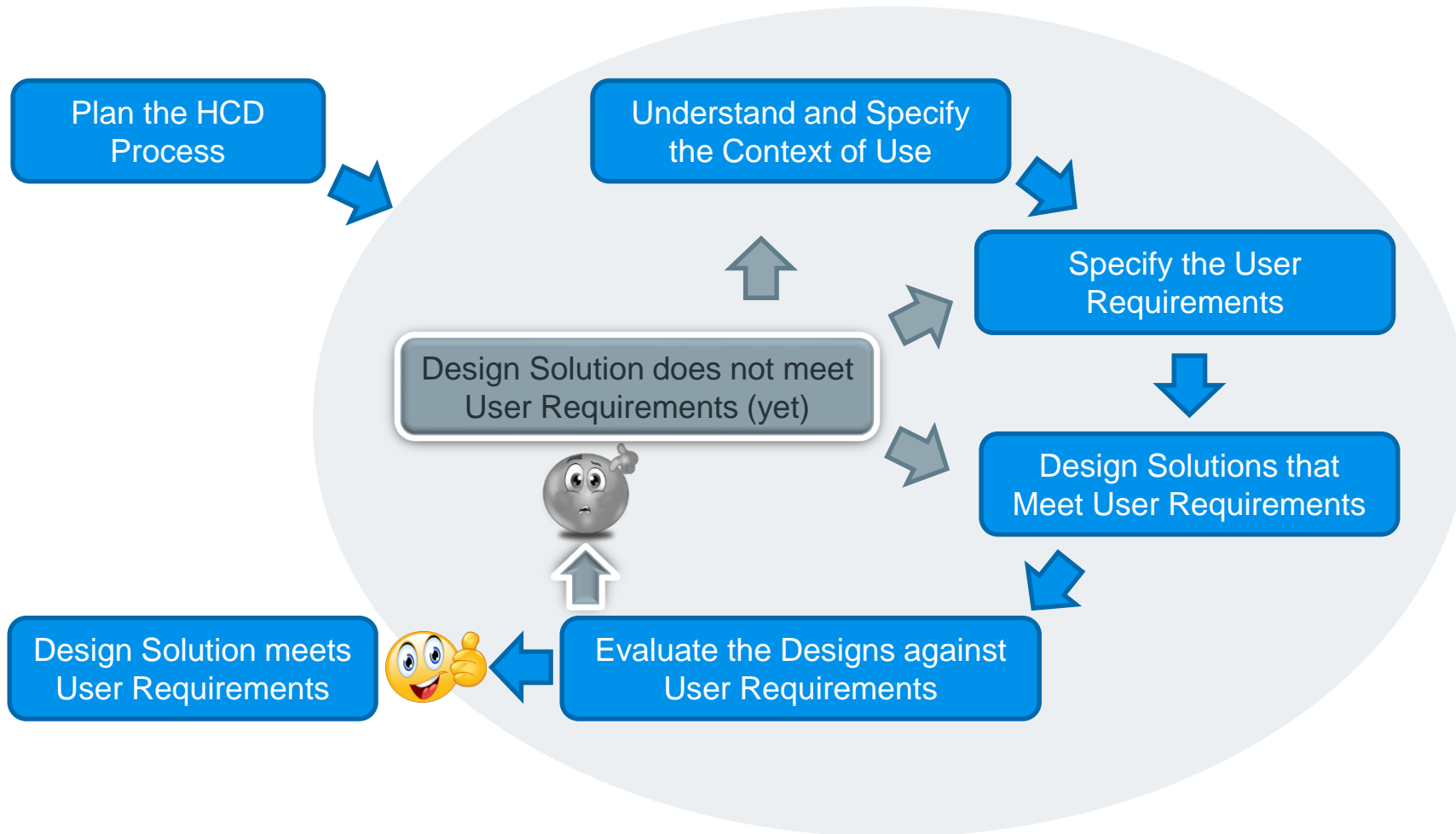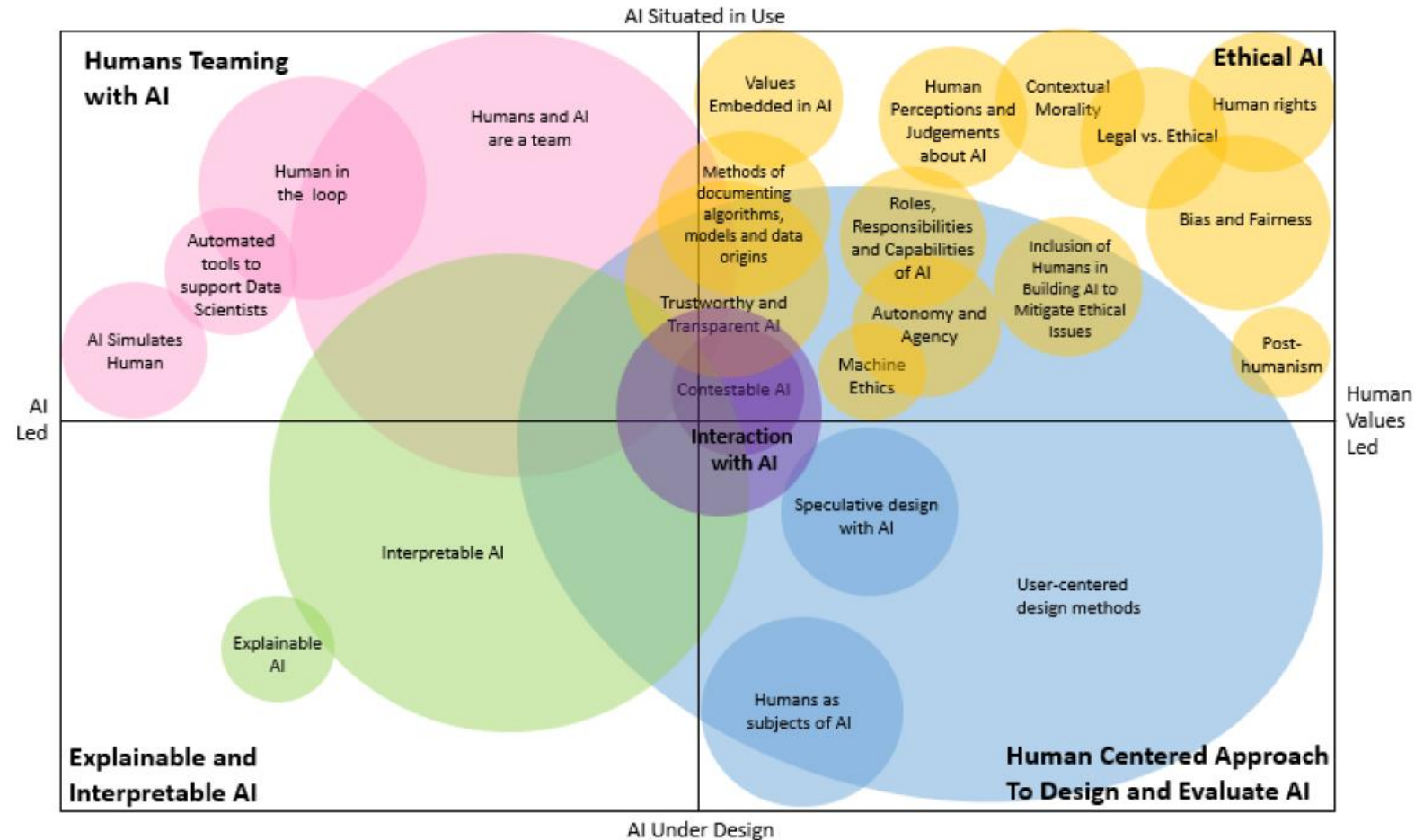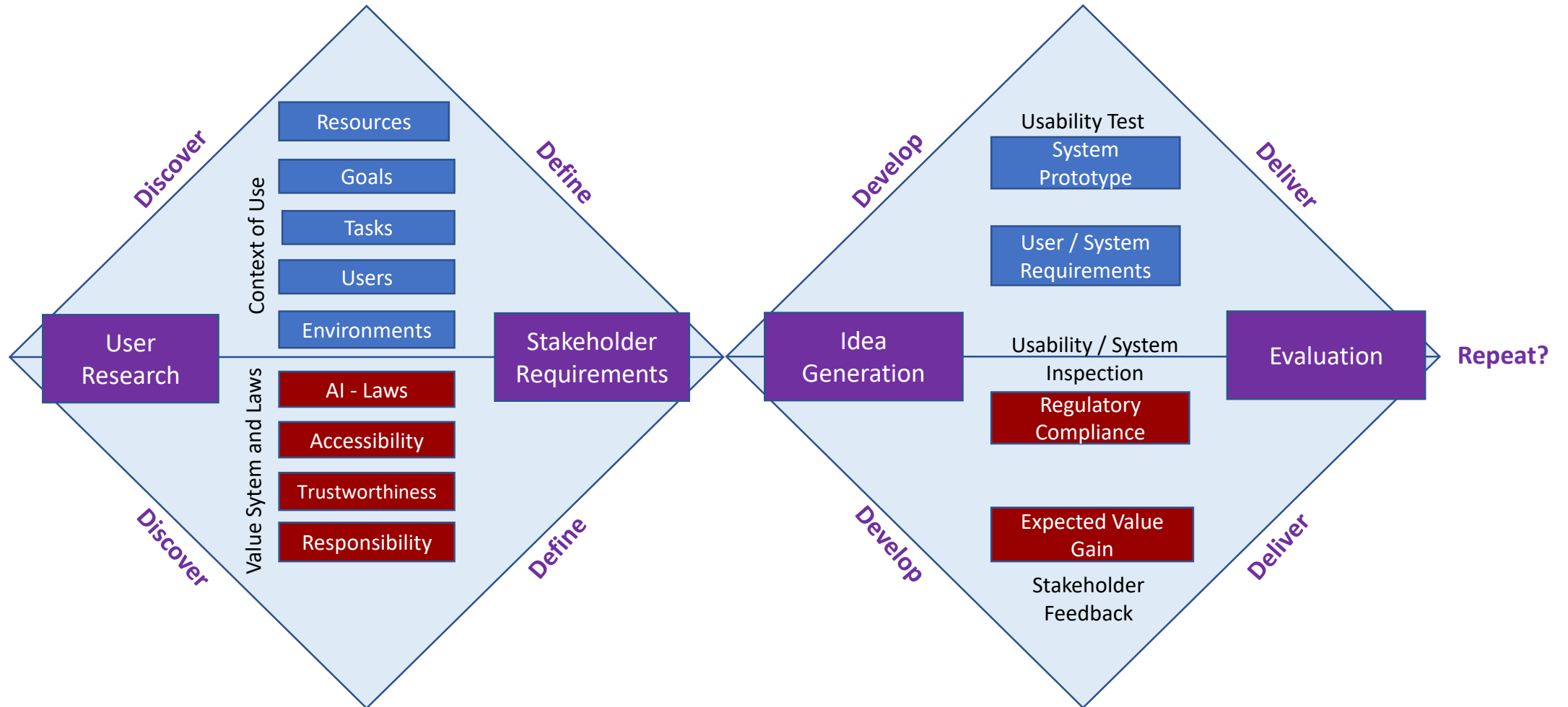# Human-Centered Design

# Human-Centered Design

# Human-Centered Artificial Intelligence

# Position:
# We need to use ideas from both fields to build usable and relevant AI systems for users in the legal domain

# Double Diamond for HCAI and HCD in Legal Tech

# Textbook Entity Network and Jurisprudence Interface

Search    🔍    ▼ Filters    🗑 Clear Filters

ⓘ Search Examples: for case name 'Nassauskiesung', case number 'BVerfGE 58 300', article name 'Erbrecht' and article number 'Art. 14 GG'. Use Filters for Advanced Search.

## Recommended Articles

**Diskriminierun...**   Citations   In the Text

Art. 3 GG
(1) Alle Menschen sind vor dem Gesetz gleich. (2) Männer und Frauen sind gleichberechtigt. Der Staat fördert die tatsächliche Durchsetzung der...

**Recht auf Lebe...**   Citations   In the Text

Art. 2 GG
(1) Jeder hat das Recht auf die freie Entfaltung seiner Persönlichkeit, soweit er nicht die Rechte anderer verletzt und nicht gegen die...

**Widerstandsre...**   Citations   In the Text

Art. 20 GG
(1) Die Bundesrepublik Deutschland ist ein demokratischer und sozialer Bundesstaat. (2) Alle Staatsgewalt geht vom Volke aus. Sie wird vom...

## Recommended Cases
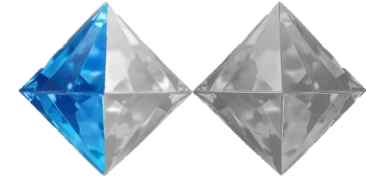
**Verfassungsge...**   Citations   In the Text

BVerfGE 18 85

**Südweststaat**   Citations   In the Text

BVerfGE 1 14

**Apotheken-Ur...**   Citations   In the Text

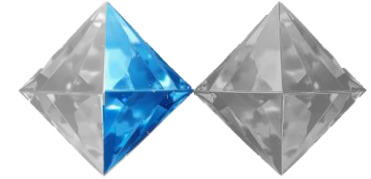BVerfGE 7 377

# Example: TENJI

**DISCOVER**

## HCAI

- Law researchers valued **explainable** search results to ensure all relevant documents were found.

## HCD

- **Usability test of the first prototype:** law students needed access to the original cited norms and cases.

- **Interviews:** German search engines do not rank relevant documents effectively: consider citation count and whether a norm or case has a publicly recognized name.
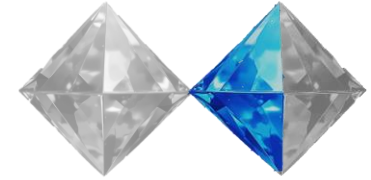
# Example: TENJI

**DEFINE**

**HCAI**

- **User Requirement:** *With the system, the user must be able to recognize why a result has been returned by the search engine to ensure all relevant documents have been found.*

**HCD**

- **User Requirement:** *With the system, the user must be able to recognize the most relevant legal norm on the first search result page.*
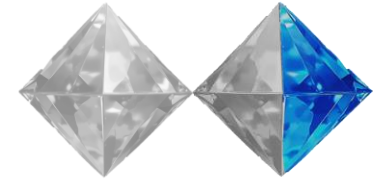
# Example: TENJI

**DESIGN**

## HCAI

- **Idea:** simple keyword-based search with lemmatization for explainability and user trust.
- **Idea:** Use open-access textbooks for legal compliance.

## HCD

- **Idea:** navigate citations among legal documents, supporting efficient and effective research
- **Idea:** Use citation counts for ranking the results

# Example: TENJI

**DELIVER**

## HCAI

- Stakeholders need to **assess the expected value of alternatives**, balancing needs such as explainability versus performance

## HCD

- TENJI is in its second iteration and was **usability tested** with law students solving exam questions, compared to those using standard digital materials.

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LEIBNIZ INSTITUTE
FOR EDUCATIONAL MEDIA
|Georg Eckert Institute