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A Prototype of a Crowd-sourcing Platform for Classification and Integration of Analysis Tools in Product Line Engineering

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Who are we...

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Motivation for a Cookbook

How to identify the most suitable analysis methods for fulfilling a given goal?

- The context in which an analysis tool is developed is seldomly documented
- What if the need is overly complex, and no single analysis tool can provide the answer?
  - Alteration: What if the required input data is not available?

Thus, from an PL practitioner's perspective

- Is there a combination of tools (i.e. toolchain) that fulfils my need?
  - Complex Analysis Toolchains
- What data do I need – What data & insights will I gain?
- Which tool helps me fulfil my needs (i.e. contributes to my goals)?

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Illustrative Overview of Feasible Transitions between Quadrants

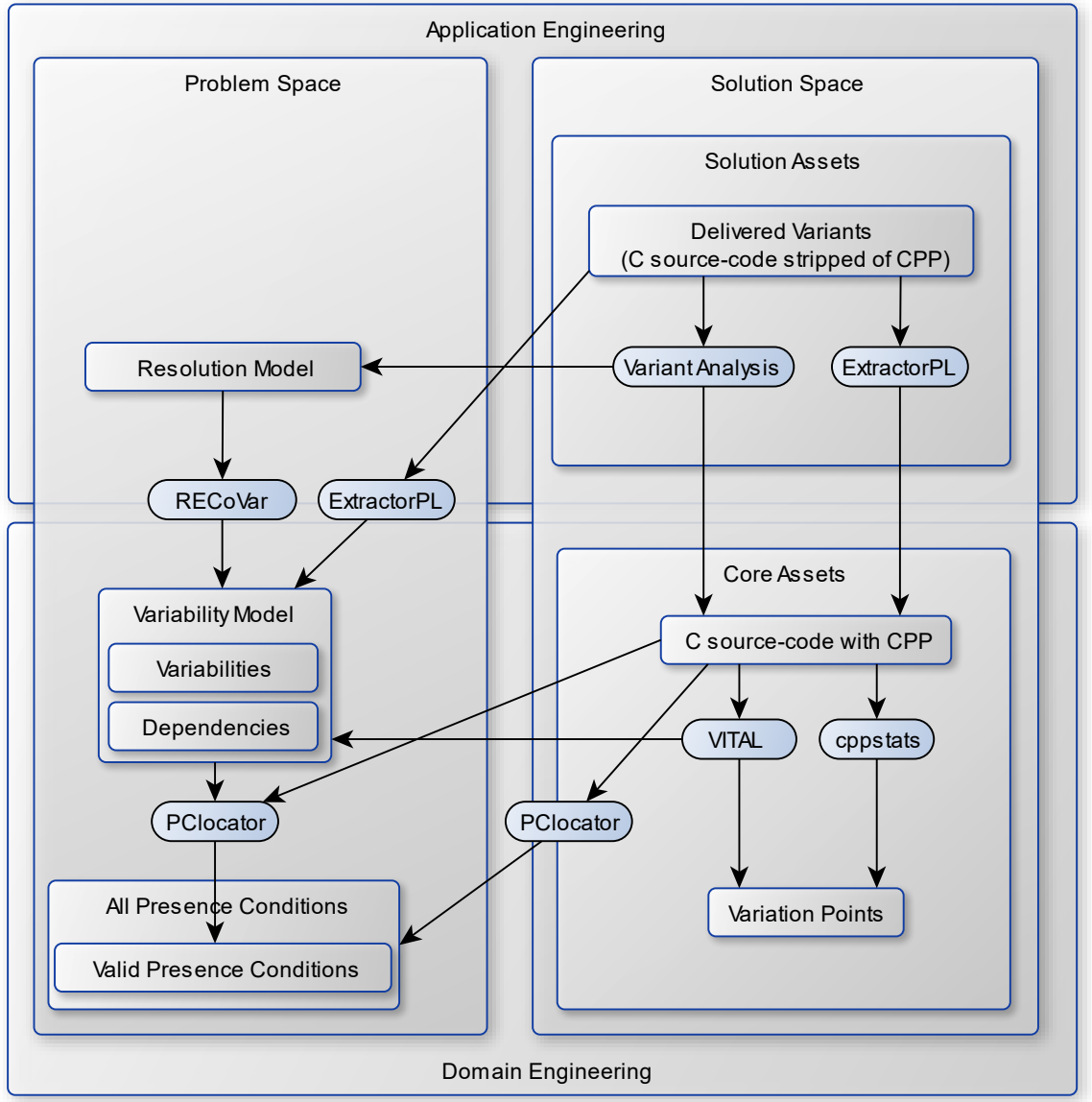
- Tools enable transitions along the PL process model
- As the cookbook improves, a transition roadmap emerges
- A path of two+ transitions can be described as a toolchain

A cookbook is useful for documenting

- Typical and complex analysis tasks
- The overall analysis tool landscape

A cookbook promotes a goal-driven analysis methodology

An open platform encourages sharing of information regarding PL analyses



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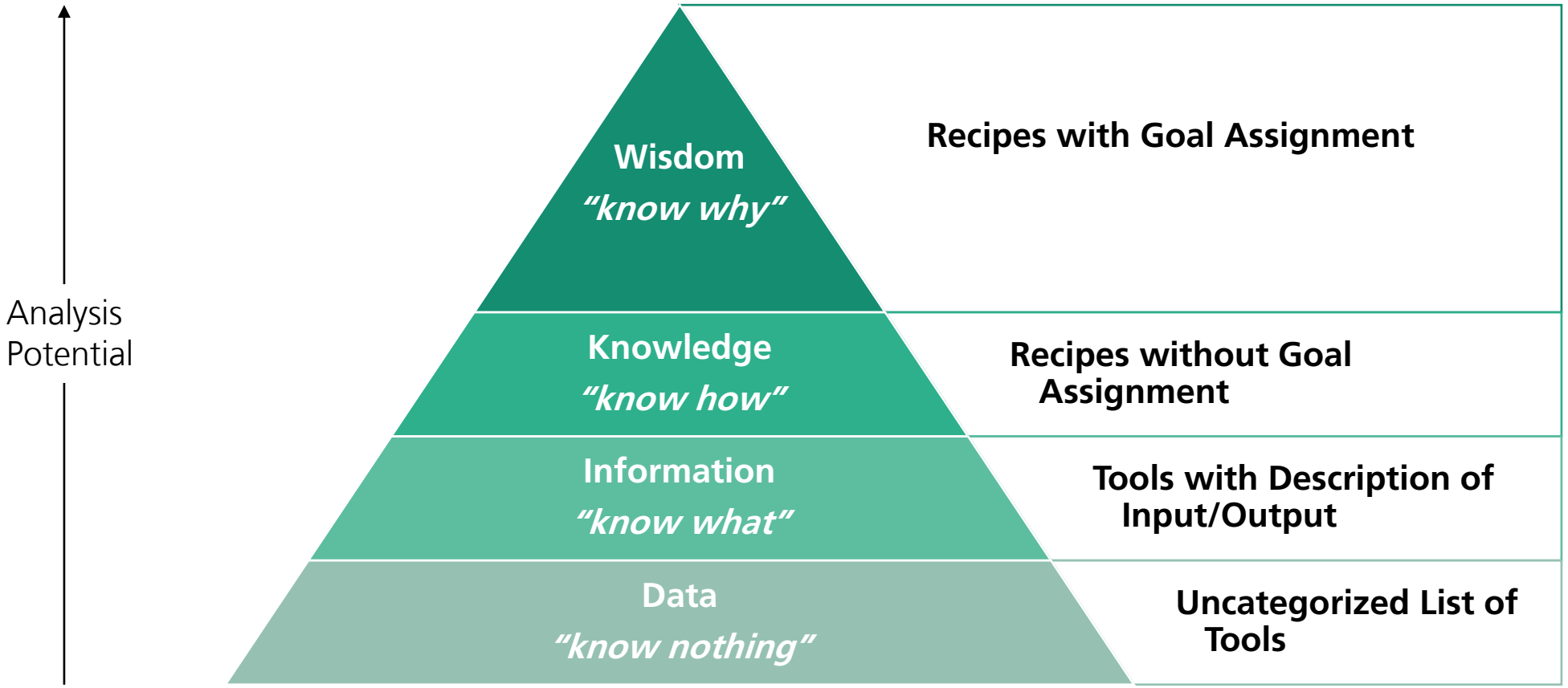
Hierarchical Overview using a DIKW Hierarchy / Wisdom Pyramid



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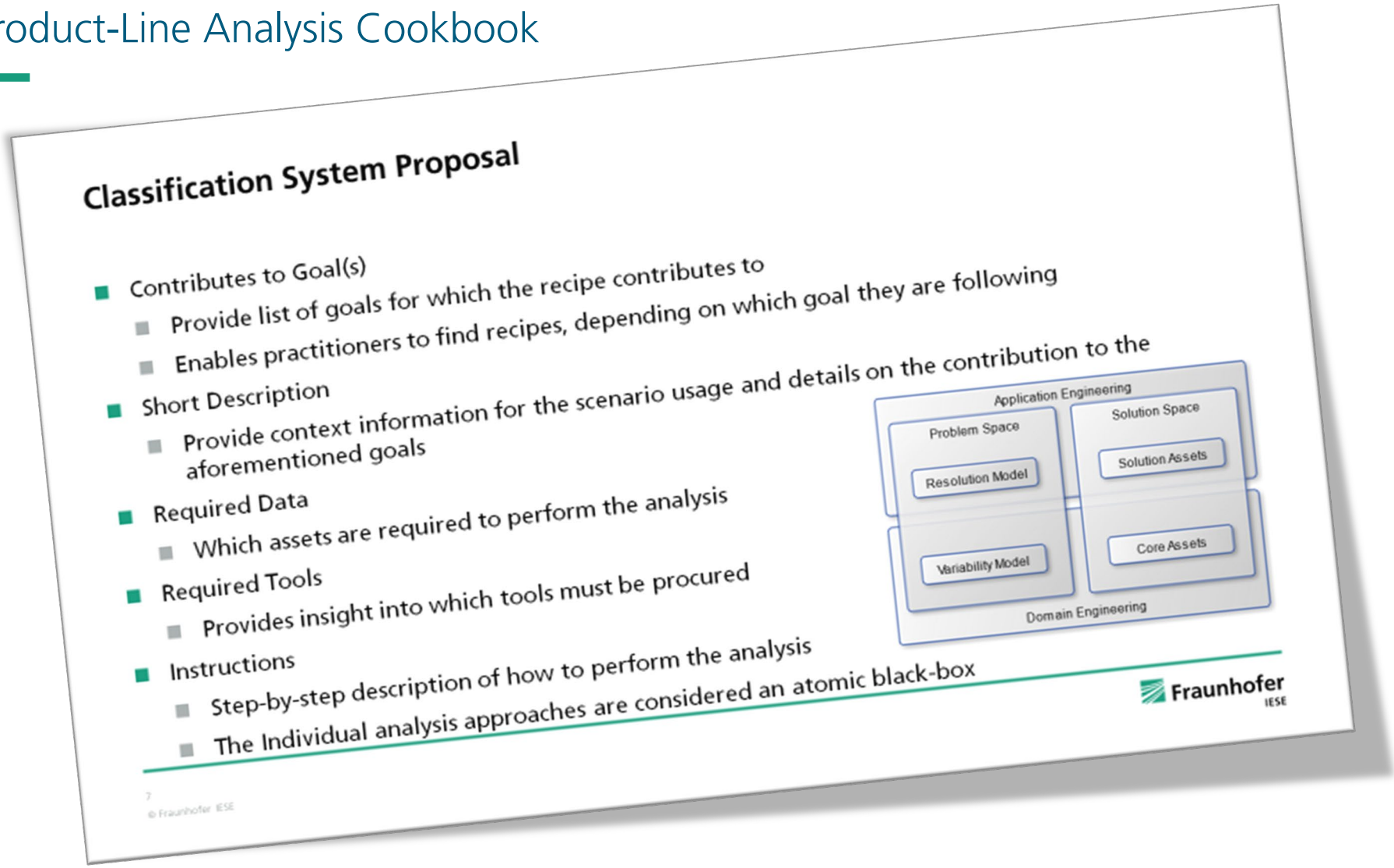
Previously on REVE 2021

Product-Line Analysis Cookbook



Presented by

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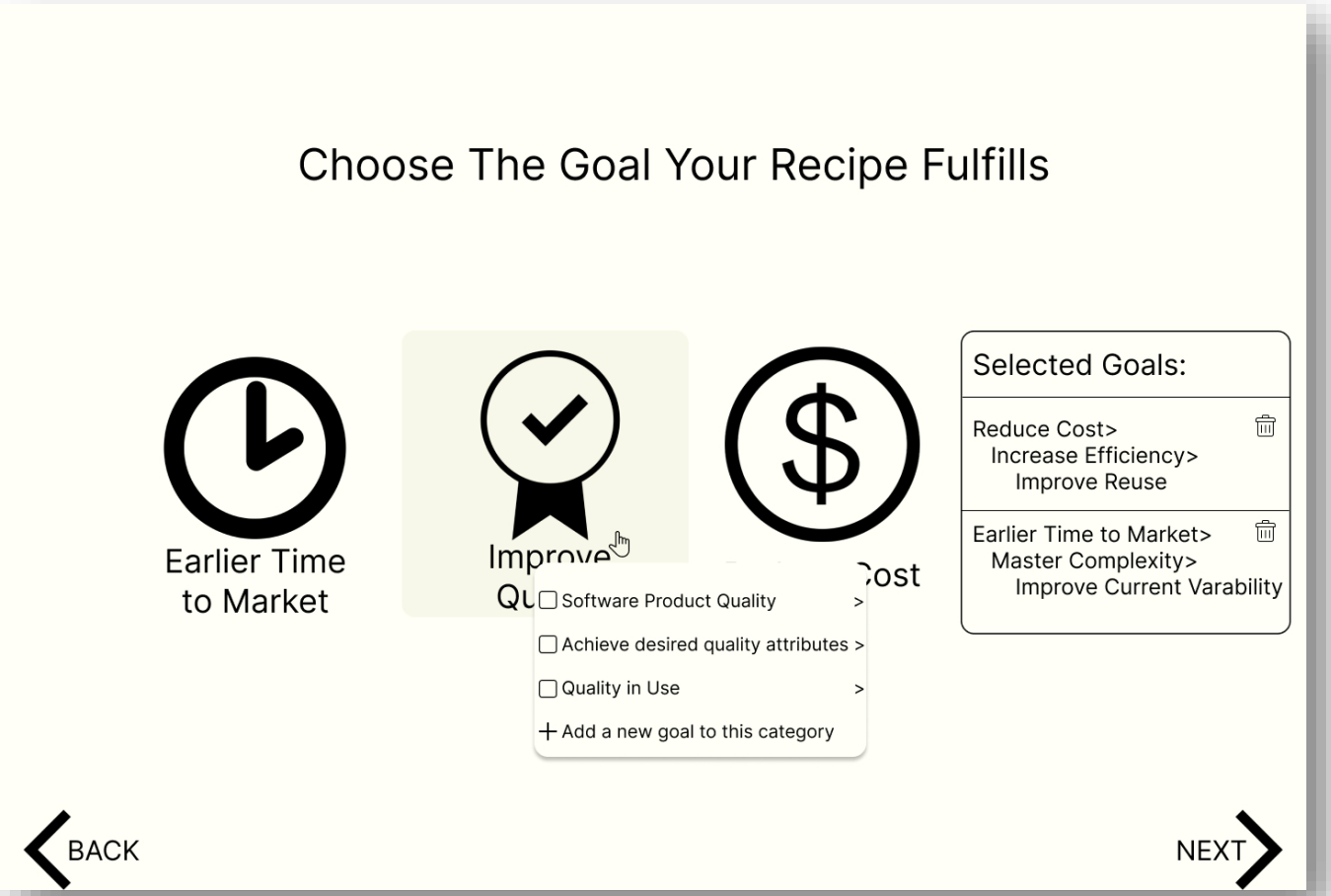
Collect Recipes

A Prototype of a Crowd-sourcing Platform (1/4)



What is my goal?

Interactive selection

- Similar to ACM Computing Classification System
- Multiple selection

Goals Hierarchy

- Initial hierarchy specified by Morais Ferreira [REVE'21]

Open for contributions of the SPLC community

- Goals
- Recipes

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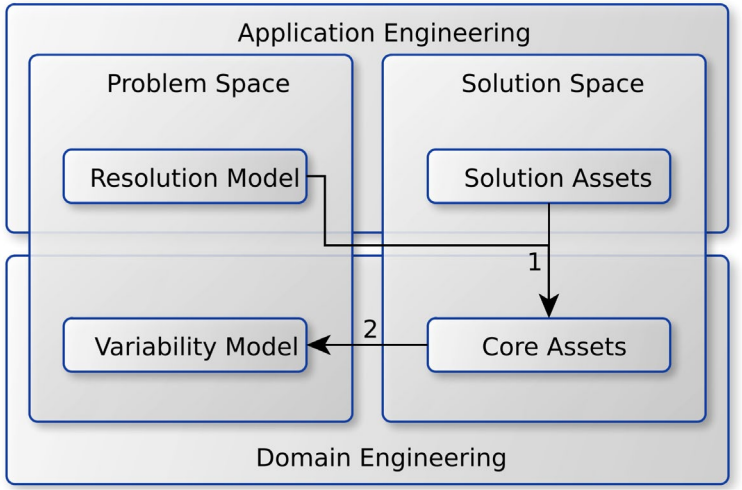
Give instructions

A Prototype of a Crowd-sourcing Platform (2/4)

Is there a combination of tools that fulfils my need?

Step-by-step instructions

- For every transition along the PL process model
- Input, Output and Tools
- Detailed description



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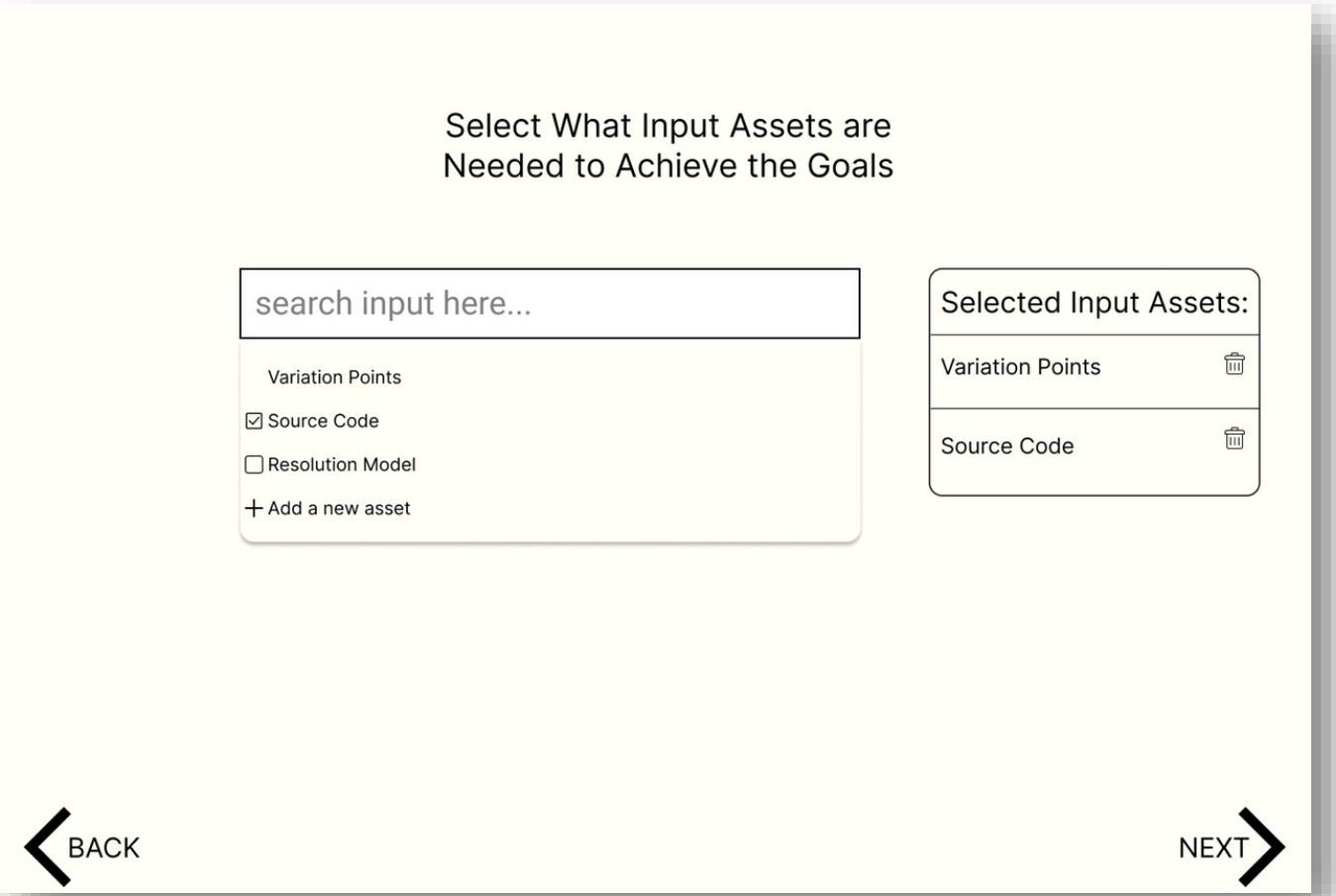
Select Data and Tools

A Prototype of a Crowd-sourcing Platform (3/4)



What data do I need and will I gain?

Interactive selection

- Similar to ACM Computing Classification System
- Multiple selection
- Same interface for selecting input, output and tools

List of data

- Initial list based on ISO/IEC 26550

Open for contributions of the SPLC community

- Data
- Tools

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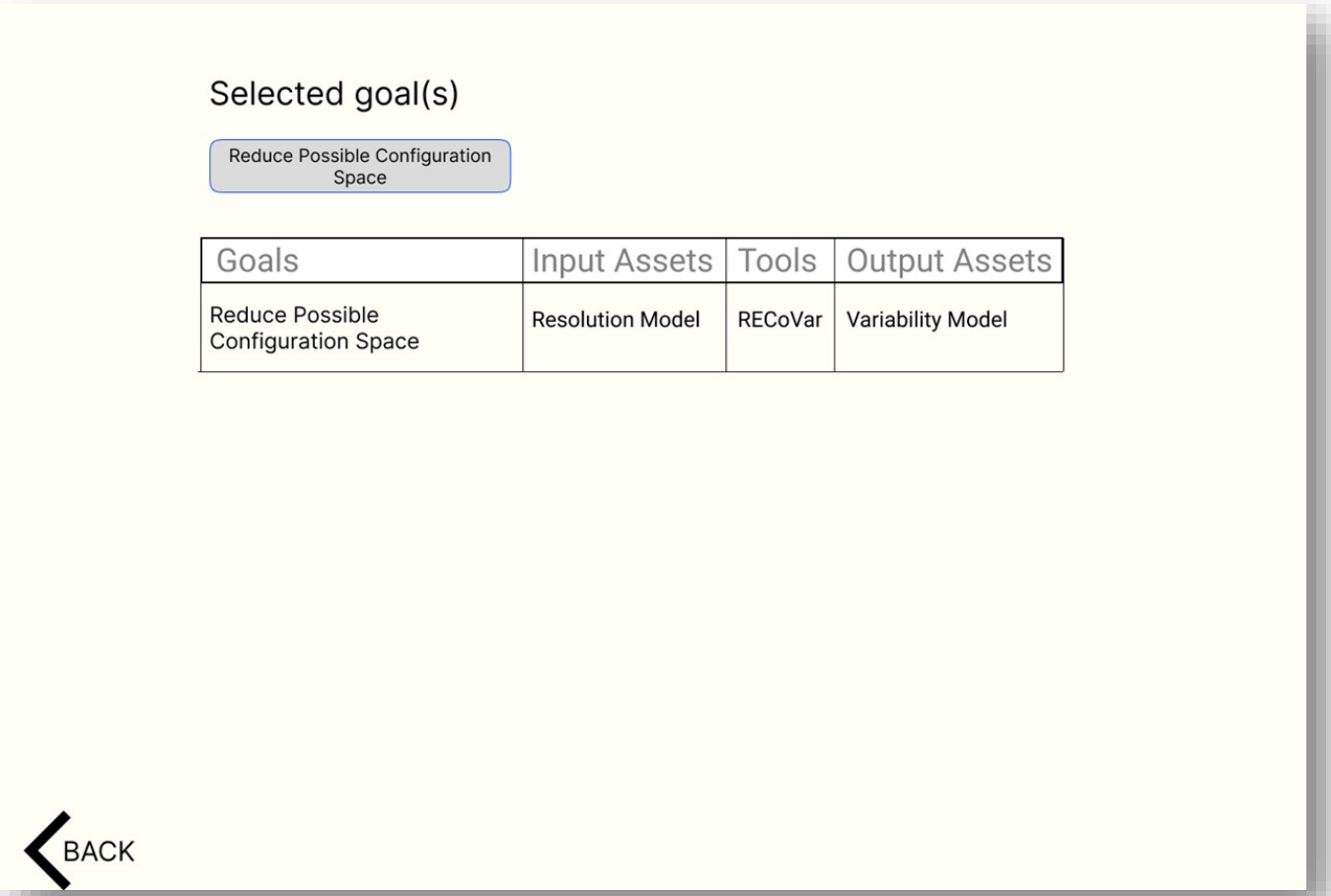
Search for Recipes

A Prototype of a Crowd-sourcing Platform (4/4)



What tool will help me meet my needs?

Browse for recipes based on

- Goals
- Data
- Tools

Gain from sharing with others

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Product-Line Analysis Cookbook

Soon available for evaluation

- **Useful for documenting**
- **Promotes a goal-driven analysis methodology**
- **Open Platform encourages sharing of information regarding PL analyses**
- **Contact and registration for early access at vasil.tenev@iese.fraunhofer.de**

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