

Dynamic Data Visualization to Improve Managerial Decision-Making

Challenge & Relevance

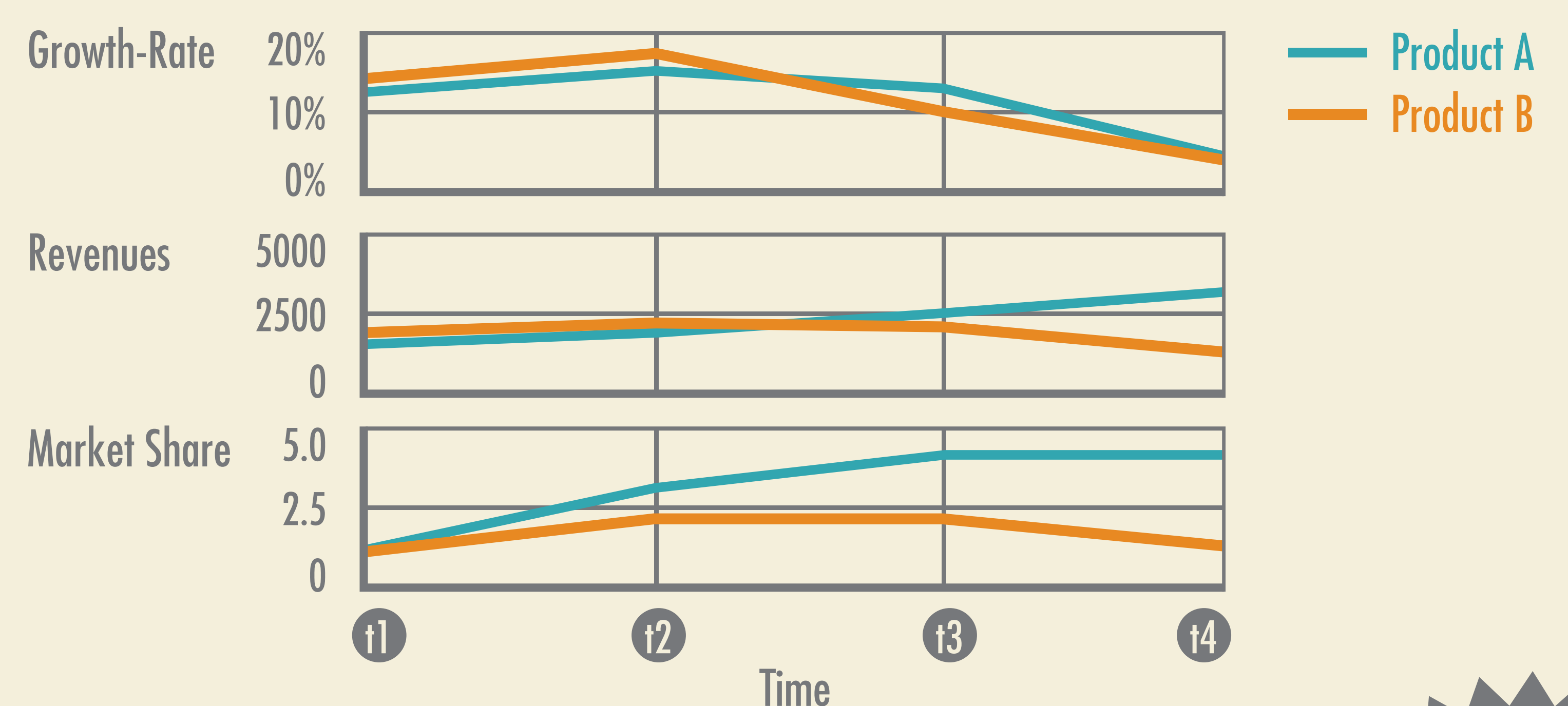
- ◆ Dynamic complexity in business grows consistently and practitioners face increasing difficulties to grasp situations as a whole.
- ◆ The focus of decision making is primarily on the short term while mid and long-term effects are neglected.
- ◆ Companies around the globe use management tools to support business decision-making, but the management tools are mostly static.
- ◆ Tools that can model dynamic situations do not have a good data visualization or the graphs are difficult to understand. Thus executives need this data translated into their models.
- ◆ **The Objective of this Project:** Add dynamics to a static management tool.
Enable executives to use commonly known tools instead of learning new tools to capture dynamic relationships.

Product: Dynamic Portfolio Matrix Tool (DPMT)

1 Time series data¹

From one or more System Dynamics models time series data is exported as Excel data table.

¹Sequence of data points over a time period.

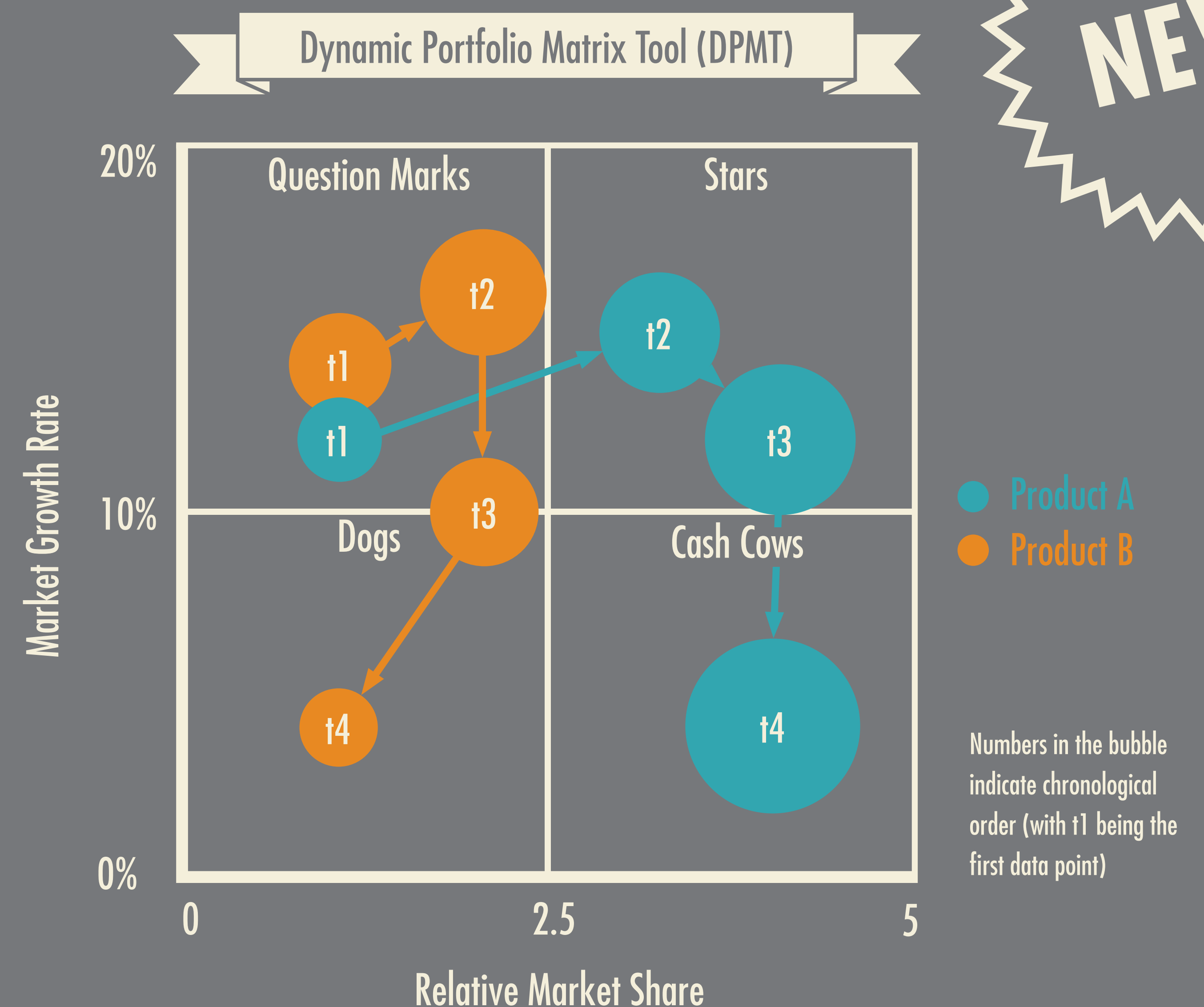


2 Dynamic data visualization

The time series data is imported into the DPMT. The number of elements are automatically recognized. The DPMT converts the data into an animated Portfolio Matrix. Decisions are made based on the DPMT.

3 Better decision making

Executives can analyse the data in already familiar management tools instead of stock and flow charts which often lead to misinterpretation. Therefore executives can make better decisions in dynamic situations.



Results

- ◆ **Functioning Prototype** of a Dynamic Portfolio Matrix Tool
- ◆ **Requirements** for the Dynamic Portfolio Matrix Tool
- ◆ **Description** of the Dynamic Portfolio Matrix Tool

Future Research

- ◆ Are better decisions being made with dynamic data visualization?
- ◆ What management tools can be improved by dynamic data visualization?