



## 22. Product Management

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<http://st.inf.tu-dresden.de/teaching/saab>

- 1) What is „Operational Product Management“?
- 2) What is „Strategic Product Management“?

# Literature

- ▶ Free books
  - <https://www.pro-productmanagement.com/tools/product-management-books-free>
- ▶ Harry Sneed. Software Produktmanagement. :  
<https://www.researchgate.net/publication/221215931>



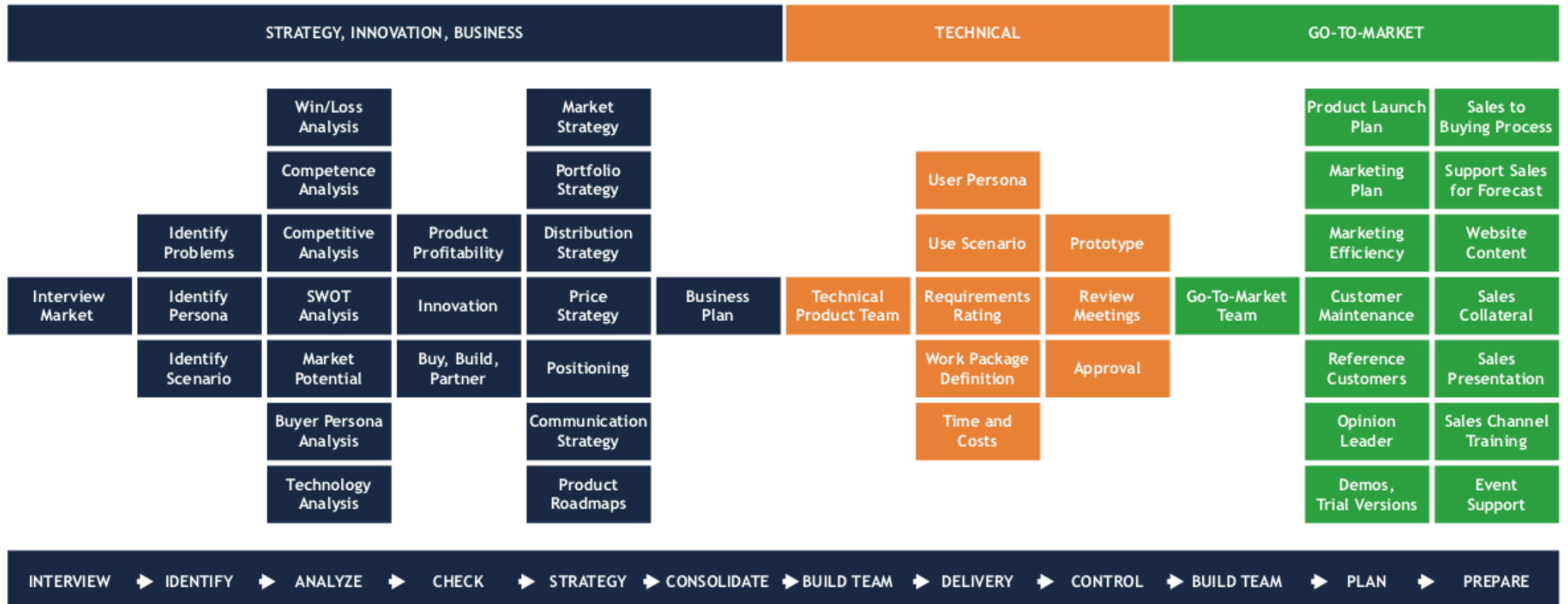
## 22.1 Operational (Technical) Product Management

- Release management (planning)
- Quality control
- Version management
- Testing
- Documentation
- Experience recording

# Steps in Product Management (Without Evolution)

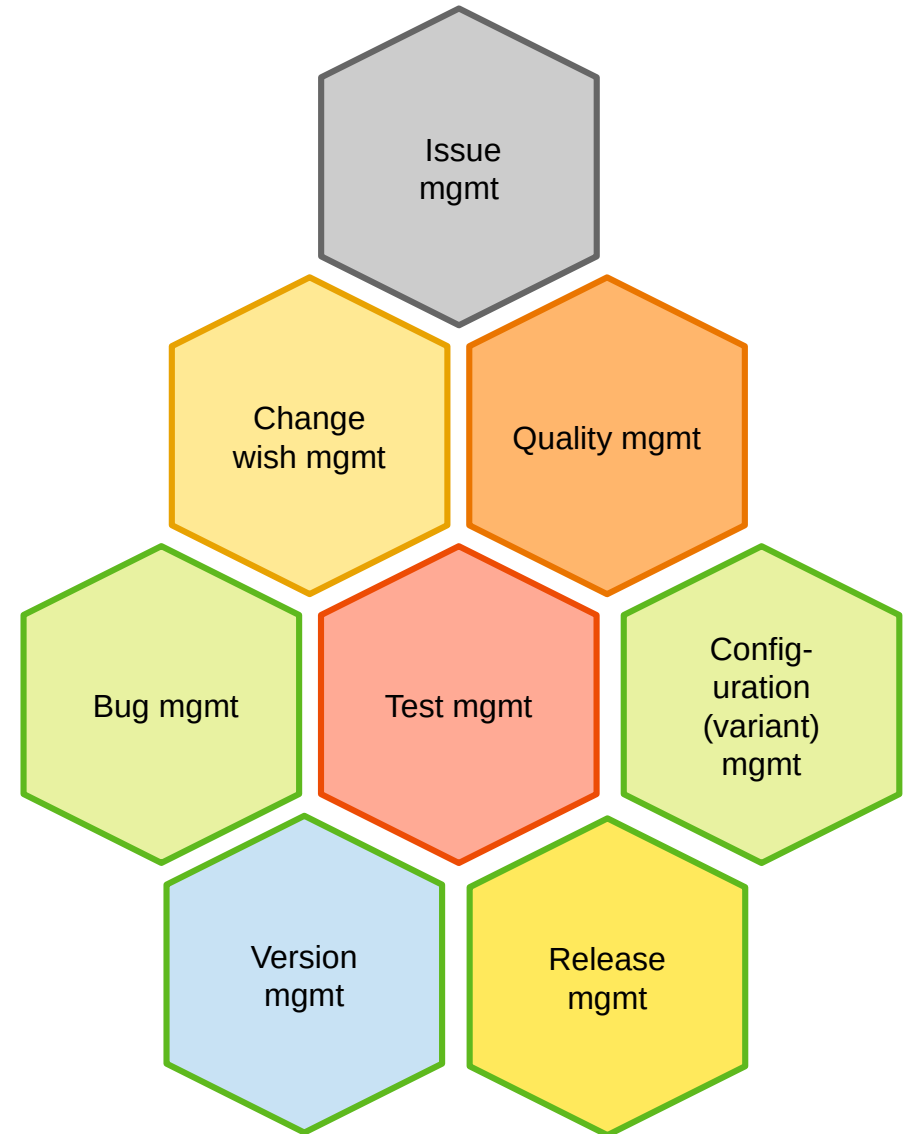
## Open Product Management Workflow™

A market-driven step by step model for developing and managing innovative products & business.



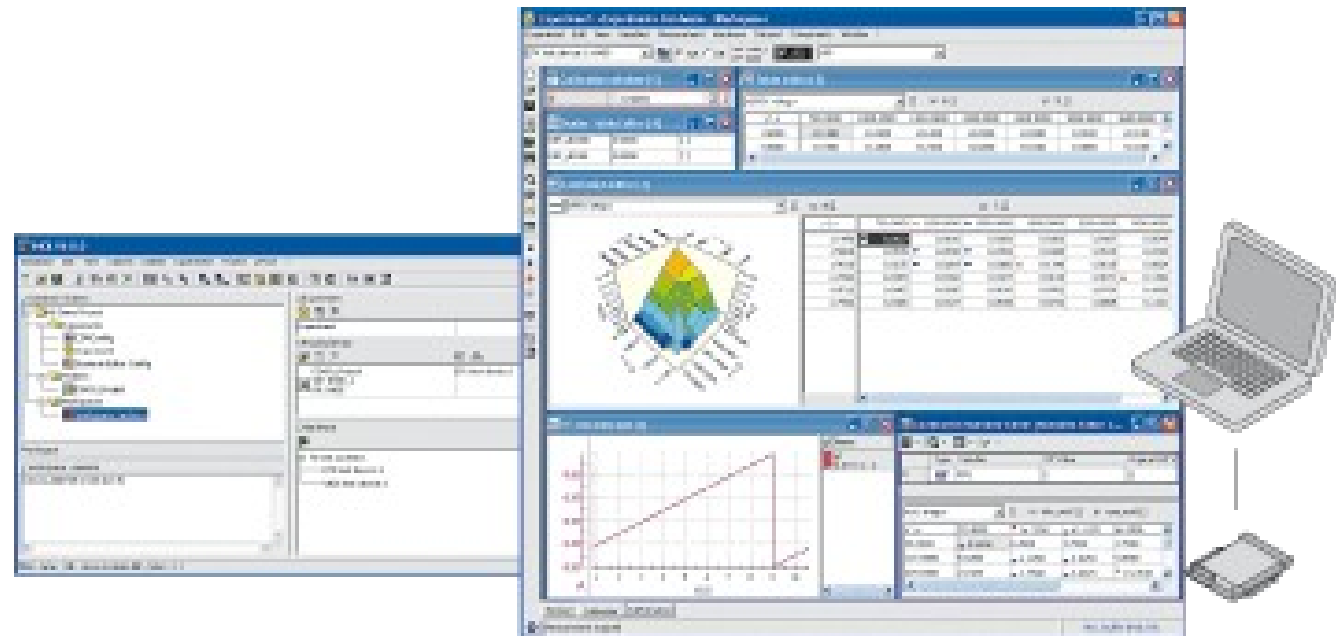
# Products Must be Evolved

- ▶ Release management needs many different activities
  - must be continuous activity
- ▶ Visit our other courses!



# Product Management (Car Diagnosis Software)

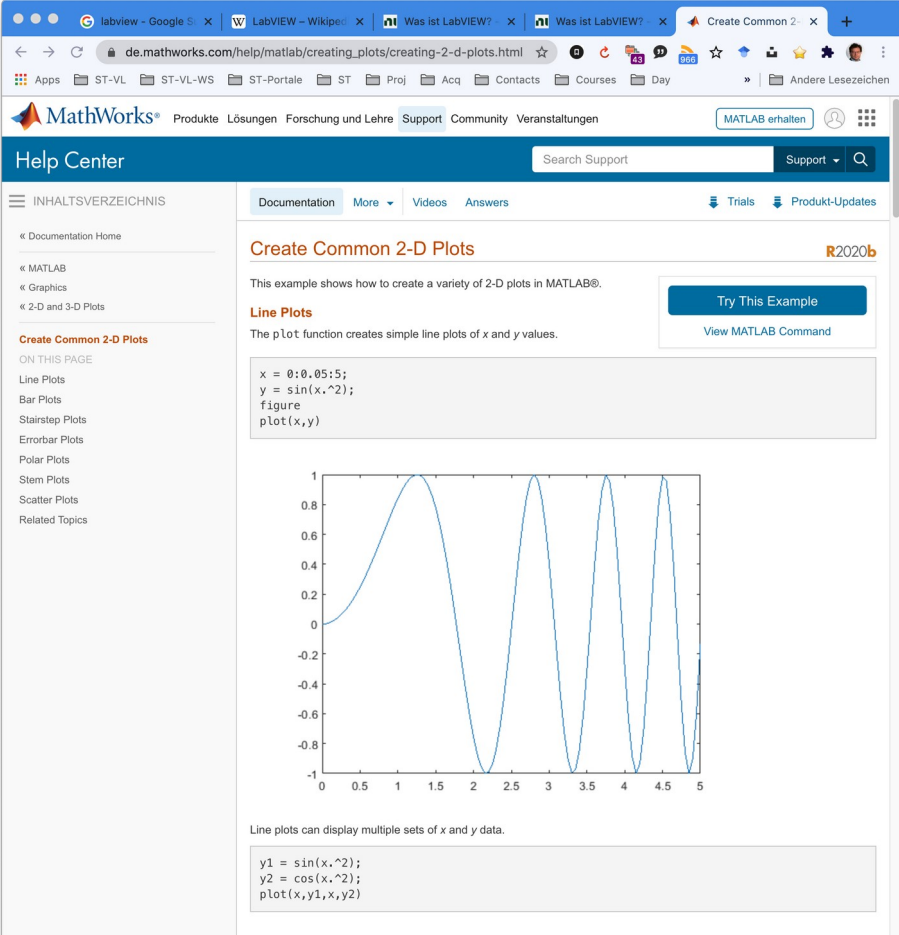
- ▶ [https://de.wikipedia.org/wiki/INCA\\_\(Software\)](https://de.wikipedia.org/wiki/INCA_(Software))
- ▶ <http://www.etas.com/de/products/inca.php>
- ▶ How many releases can you recognize? How often?  
[https://www.etas.com/de/portfolio/inca\\_software\\_products-inca\\_service\\_packs.php](https://www.etas.com/de/portfolio/inca_software_products-inca_service_packs.php)



# MathWorks / Matlab

## 7 Software as a Business

- ▶ Website with many of the items of a product landing page
- ▶ [https://de.wikipedia.org/wiki/The\\_MathWorks](https://de.wikipedia.org/wiki/The_MathWorks)
- ▶ <https://de.mathworks.com/company/newsletters/articles/the-origins-of-matlab.html>
- ▶ [http://www.mathworks.com/tagteam/72887\\_92020v00Cleve\\_Growth\\_MATLAB\\_MathWorks\\_Two\\_Decades\\_Jan\\_2006.pdf](http://www.mathworks.com/tagteam/72887_92020v00Cleve_Growth_MATLAB_MathWorks_Two_Decades_Jan_2006.pdf)
- ▶ Analyze the pricing models
  - [https://de.mathworks.com/pricing/licensing.html?s\\_iid=hp\\_ff\\_t\\_pricing](https://de.mathworks.com/pricing/licensing.html?s_iid=hp_ff_t_pricing)
- ▶ How many tutorials?  
[https://de.mathworks.com/help/examples.html?s\\_tid=hp\\_ff\\_l\\_examples](https://de.mathworks.com/help/examples.html?s_tid=hp_ff_l_examples)
- ▶ User conferences  
[https://de.mathworks.com/company/events.html?s\\_tid=gn\\_ev](https://de.mathworks.com/company/events.html?s_tid=gn_ev)



The screenshot shows the MathWorks Help Center page for 'Create Common 2-D Plots'. The page includes a search bar, navigation tabs for Documentation, Videos, and Answers, and a sidebar with a table of contents. The main content area features a title 'Create Common 2-D Plots' with a 'Try This Example' button. Below the title, there is a code block for a MATLAB script that generates a 2-D line plot of a sine wave. The plot shows a blue sine wave oscillating between -1 and 1 on the y-axis and 0 to 5 on the x-axis. Below the plot, there is a code block for a more complex plot with two data series.

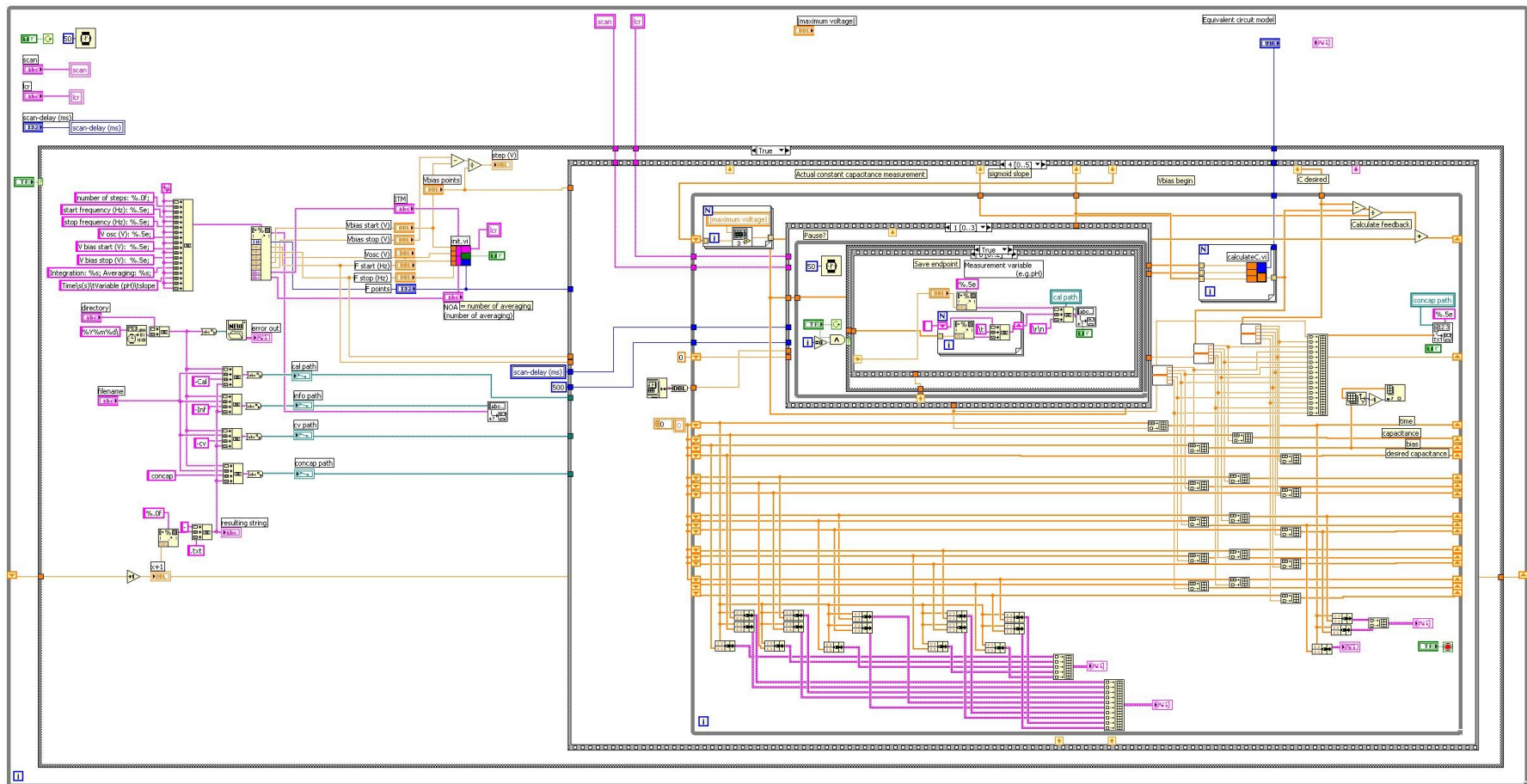
```
x = 0:0.05:5;  
y = sin(x.^2);  
figure  
plot(x,y)
```

Line plots can display multiple sets of x and y data.

```
y1 = sin(x.^2);  
y2 = cos(x.^2);  
plot(x,y1,x,y2)
```

# National Instruments LabView

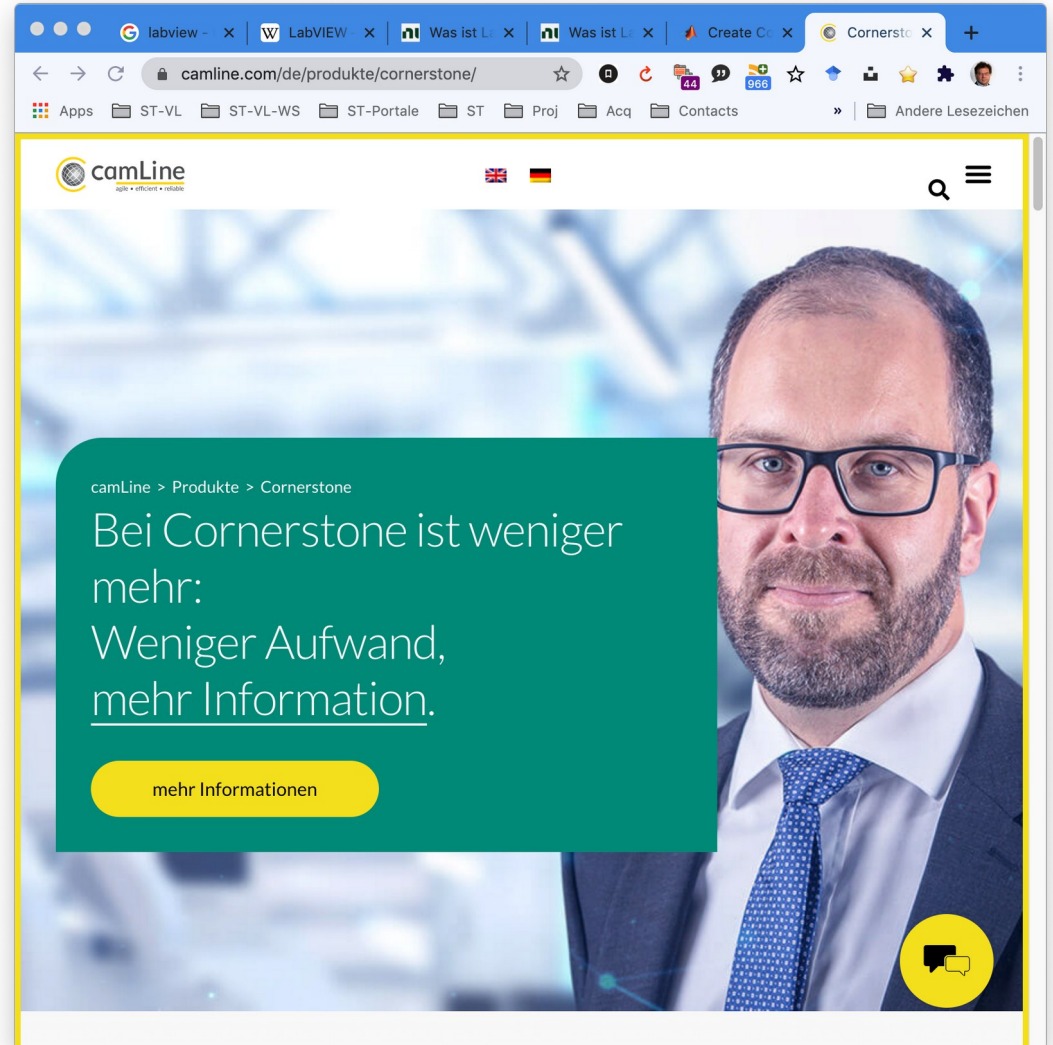
- ▶ Visual editor for Simulink specifications (simulations, continuous simulations)
- ▶ <https://www.ni.com/de-de/shop/labview.html>
- ▶ How many releases can you count? <https://de.wikipedia.org/wiki/LabVIEW>
- ▶ How many books? Explanation videos?





# CamLine Cornerstone

- ▶ <https://www.camline.com/de/produkte/cornerstone/>
- ▶ Blog-style landing page
- ▶ Benefit-oriented magnetic headline
- ▶ Opt-In Button “more infos”
- ▶ Reference Story
- ▶ Contact Form
- ▶ Demonstration of different domains for application of product





## **22.2. Strategic Product Management and Change Analysis**



## 22.2.1 Change Analysis with Change Canvases

- Value Proposition is about what customers need today
- Change analysis is about what customers will need **tomorrow**

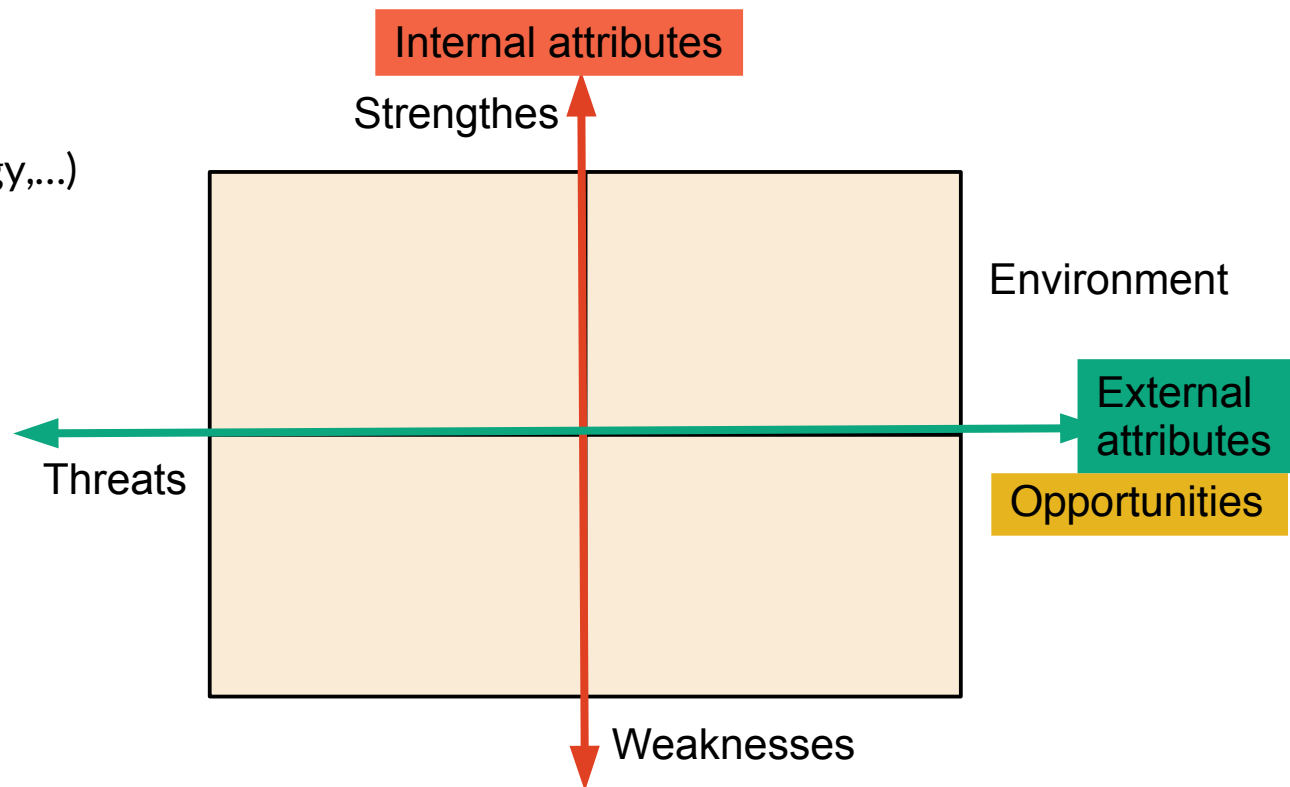
# Change Patterns the Lean Innovator has to Know and the Opportunities in the SWOT Analysis

External factors of change:

- ▶ Society
  - Finding new governance rules and laws (Sarbanes-Oxley, certifications)
  - Change of government, also in other countries (Wende, Treuhand...)
- ▶ Nature
  - Times of the year
- ▶ Technology
  - New technology (innovation waves, disruptive technology,...)
  - Digitalization
- ▶ Economics
  - Commodity pattern
  - Economic cycles

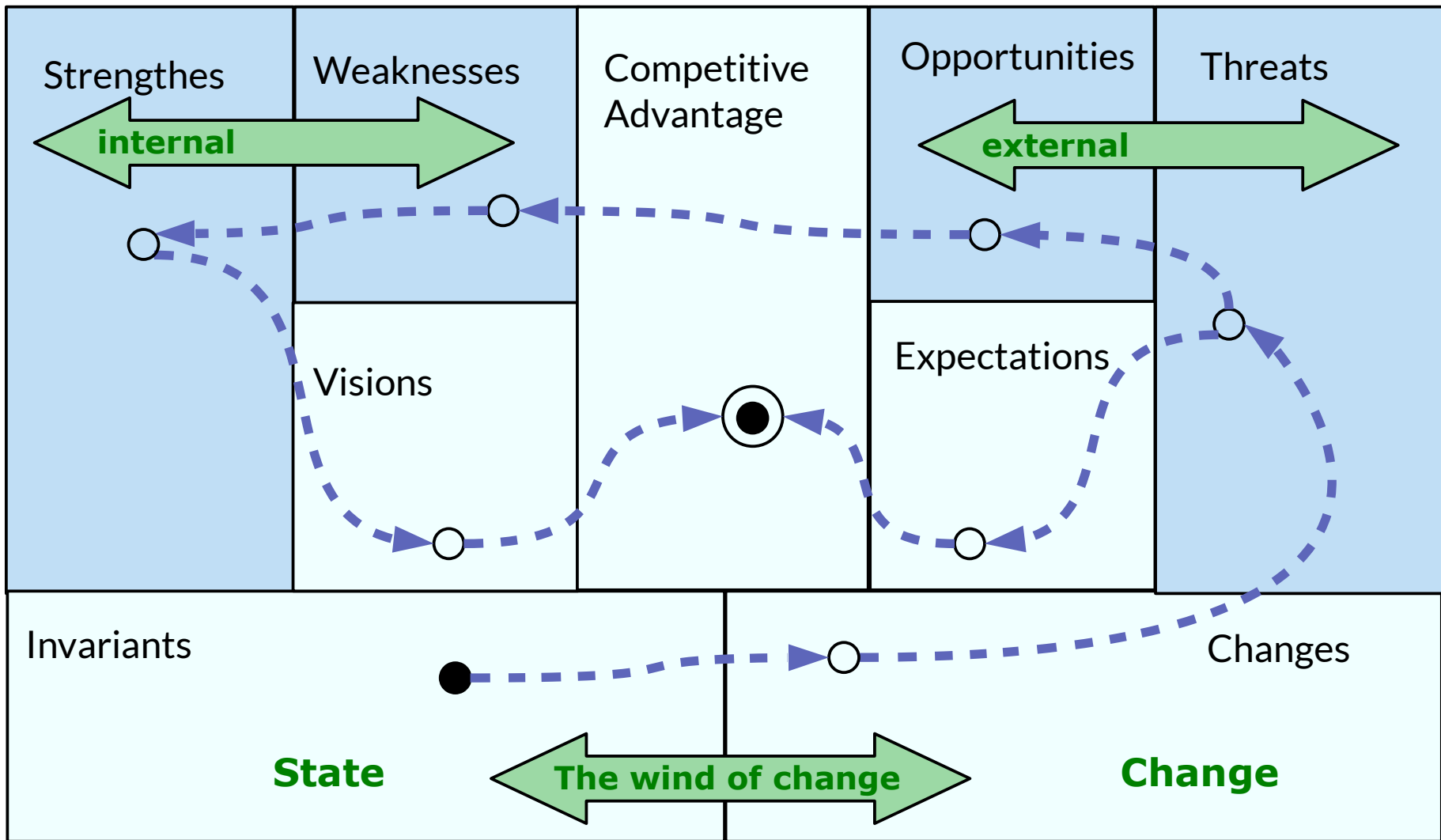
Internal factors of change:

- ▶ Supplier changes
- ▶ Patents expire



# SWOT Change Canvas

- ▶ Derived from SWOT



# Lean Change Canvas

- ▶ <http://agileconsulting.blogspot.de/2012/08/lean-change-part-1-combining-kotter-and.html?m=1>
- ▶ <https://canvanizer.com/new/lean-change-canvas>
- ▶ <https://leanchange.org/resources/canvases/>

## Lean Change Canvas Brainstorm your organizational transformation

<p><b>Urgency</b> Top 3 drivers, and what needs to change</p> <p style="font-size: 48px; text-align: center;">1</p>	<p><b>Target State</b> Strategic pillars, common enablers, etc</p> <p style="font-size: 48px; text-align: center;">5</p>	<p><b>Vision</b> Single compelling statement that describes what the "destination" looks like</p> <p style="font-size: 48px; text-align: center;">3</p>	<p><b>Communication</b> 2 way path of communication</p> <p style="font-size: 48px; text-align: center;">4</p>	<p><b>Change Recipients</b> Who is impacted by the change</p> <p style="font-size: 48px; text-align: center;">2</p>
<p><i>Capability of Org to Execute:</i></p>	<p><b>Success Criteria</b> Change will stick when:</p> <p style="font-size: 48px; text-align: center;">5</p>	<p><i>Key Behaviours:</i></p>	<p><b>Action</b> Key methods used to implement change</p> <p style="font-size: 48px; text-align: center;">8</p>	<p><i>Guiding Teams:</i></p>
<p><b>Required Investments</b> Constraints around time, cost, and effort Commitment from recipients, leaders, and change agents</p> <p style="font-size: 48px; text-align: center;">7</p>			<p><b>Wins</b> Moral Performance Capability</p> <p style="font-size: 48px; text-align: center;">6</p>	



# The End

- ▶ Why is change analysis important in strategic management?
- ▶ How many releases of a product per year are reasonable?
- ▶ How will you organize testing for the releases?
- ▶ How do you ensure documentation for developers?
- ▶ Explain how you set up the activities for release management.