

Software Vendors

Prof. Dr. Dirk Riehle

Friedrich-Alexander University Erlangen-Nürnberg

COSS B03

Licensed under CC BY 4.0 International

Agenda

1. Products and vendors
2. Projects vs. product firms
3. Business functions
4. Core business processes
5. The income statement
6. Vendor life-cycle
7. Example business models

1. Products and Vendors

The Main Types of Industry Players (Recap)

- **Standard product providers**
 - **(Independent) software vendors (ISVs)**
 - Produce software products (“standard software” or “commercial off-the-shelf software”)
 - **Software service providers (e.g. “Internet companies”)**
 - Operate any form of software (and hardware)
- **Software consulting firms**
 - Development services firms
 - Produce custom software
 - Implementation services firms
 - Configure software products for use by customers
- **Regulatory bodies**
 - Regulate the industry

Core, Basic, and Whole Product (Recap)

- **Core product** =
 - Core software
 - Additional functionality
 - Complementary artifacts
 - Self-help services
- **Basic product** = core product +
 - Fitness for use / certification
 - Indemnification
 - Support services
- **Whole product** = basic product +
 - Training
 - Consulting
 - Operations

2. Product vs. Project Firms

Enterprise Software Products and Projects

Software
Vendor

Product

Consulting
Firm

Project



Widget Corp.
BI Impl. 2008



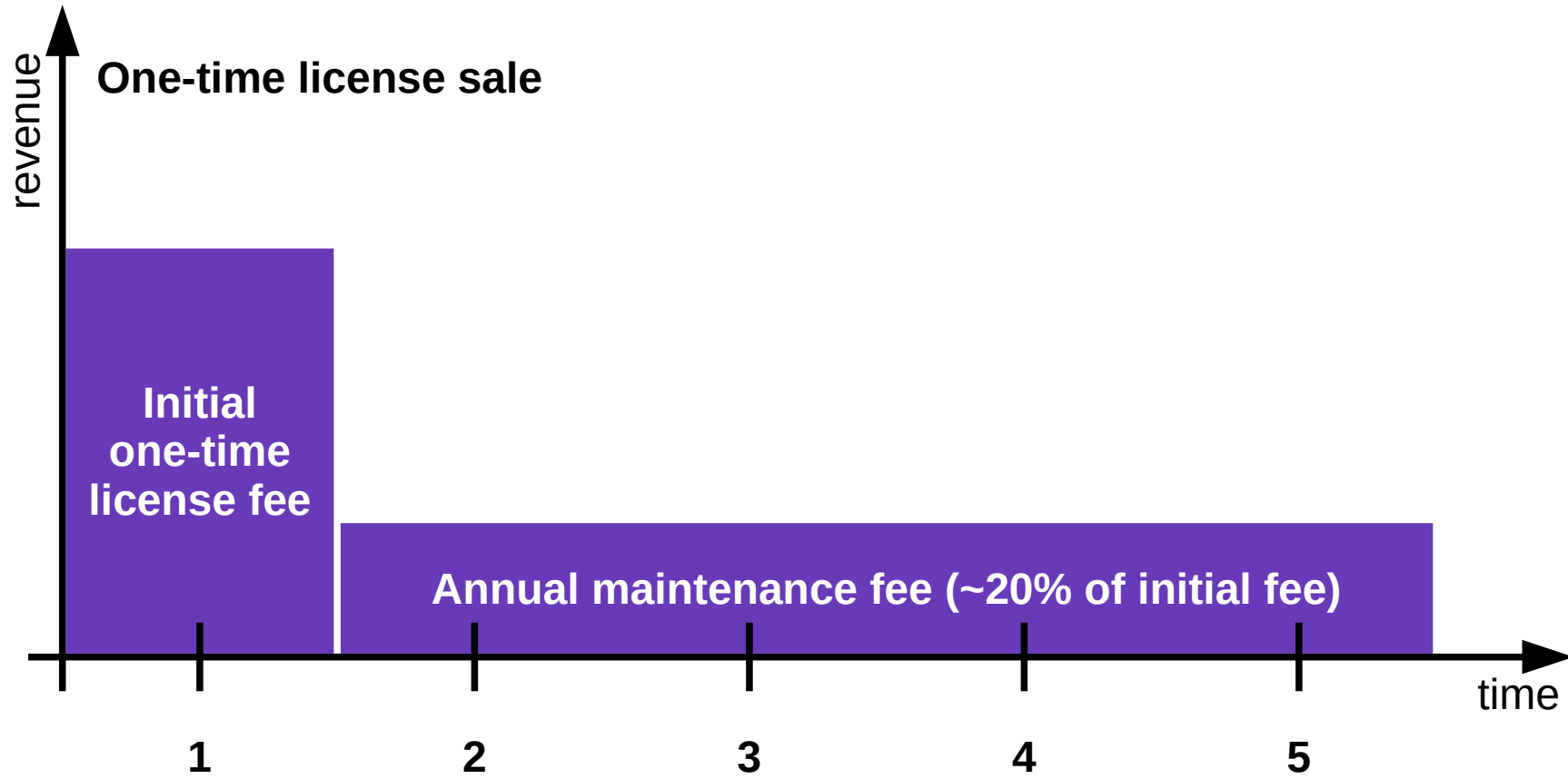
German SME
Sugar 2010



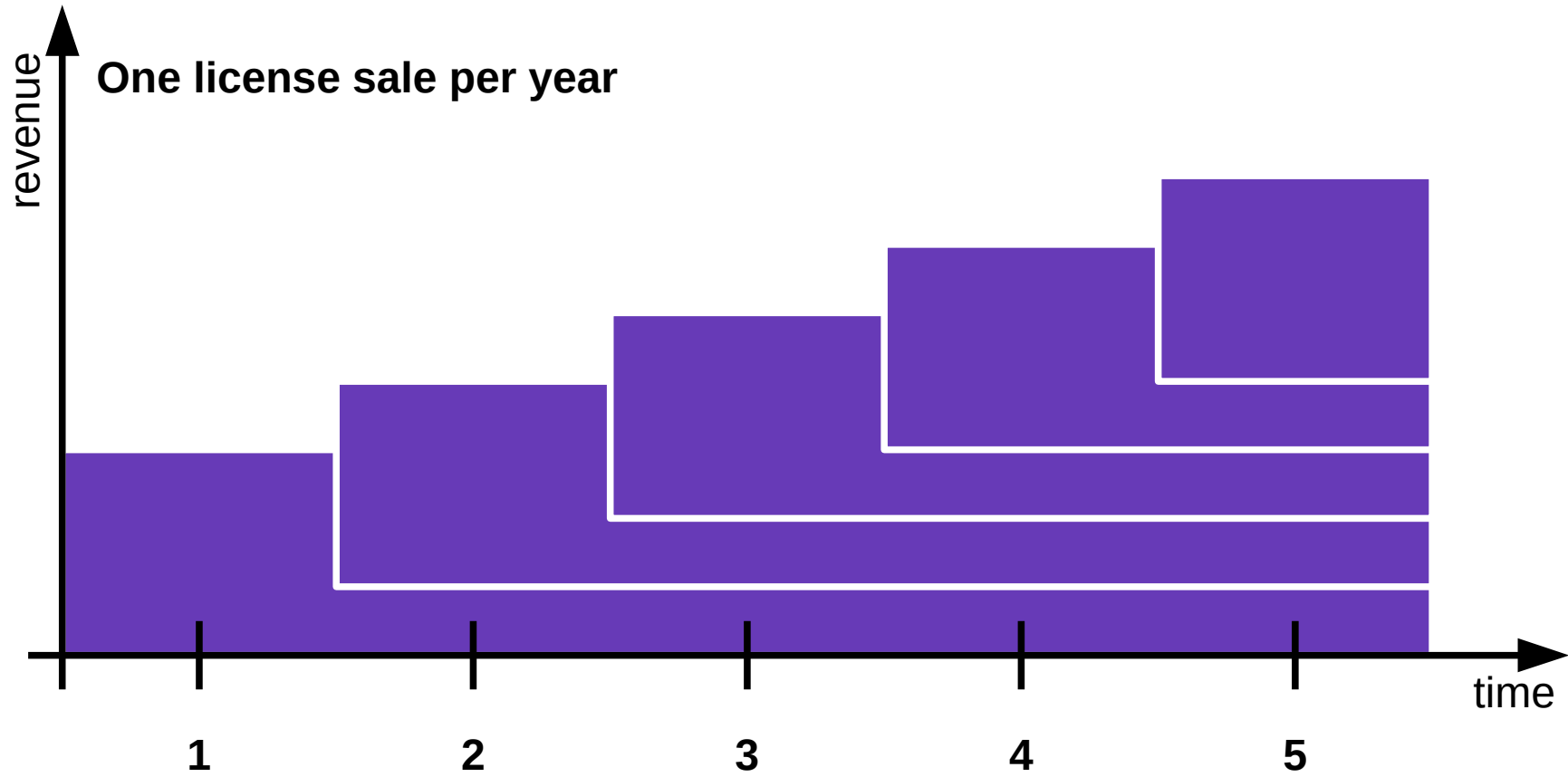
Continental
Stages 2010



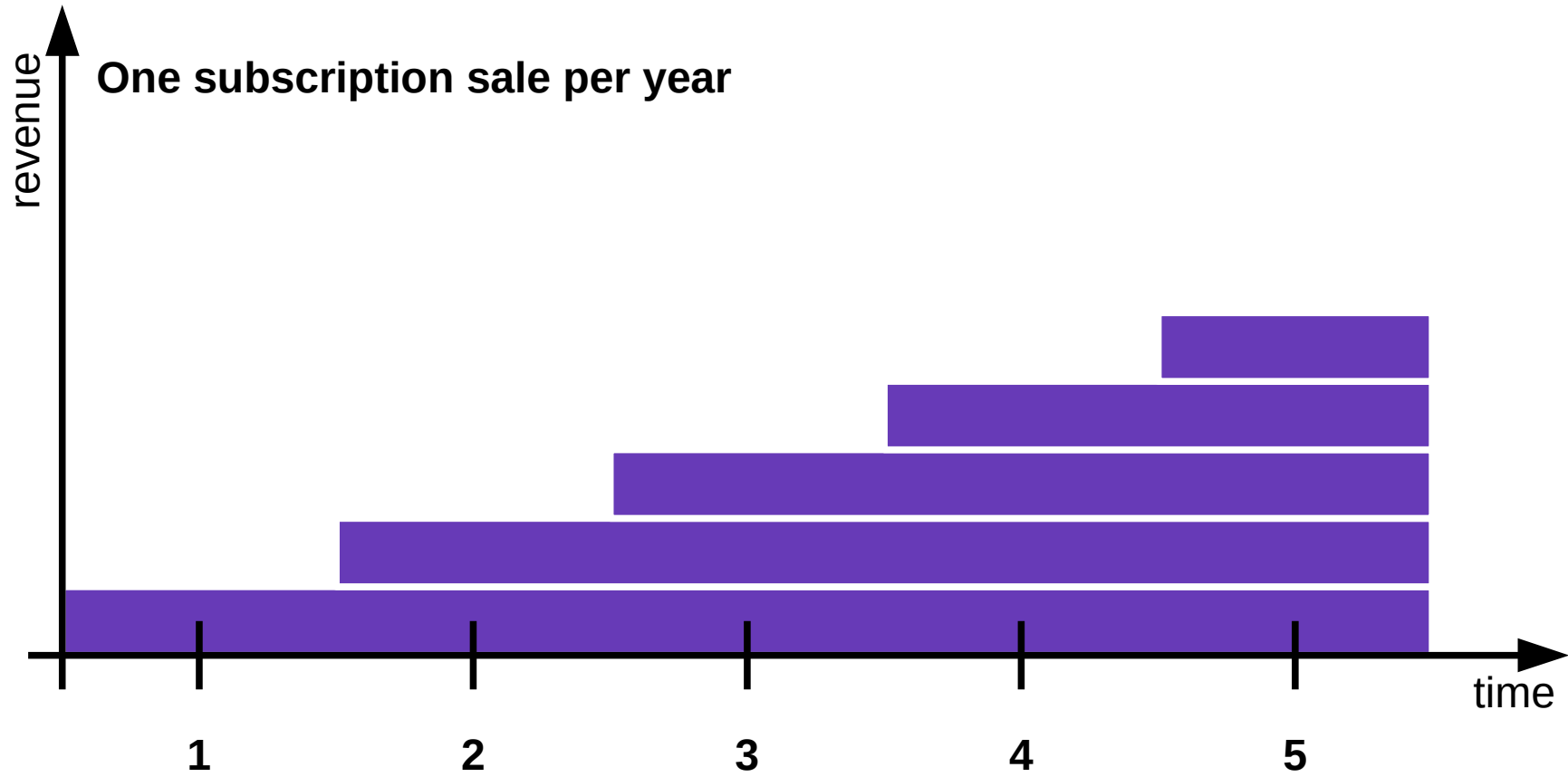
Software Product Revenue



Accumulating Traditional Software Product Revenue



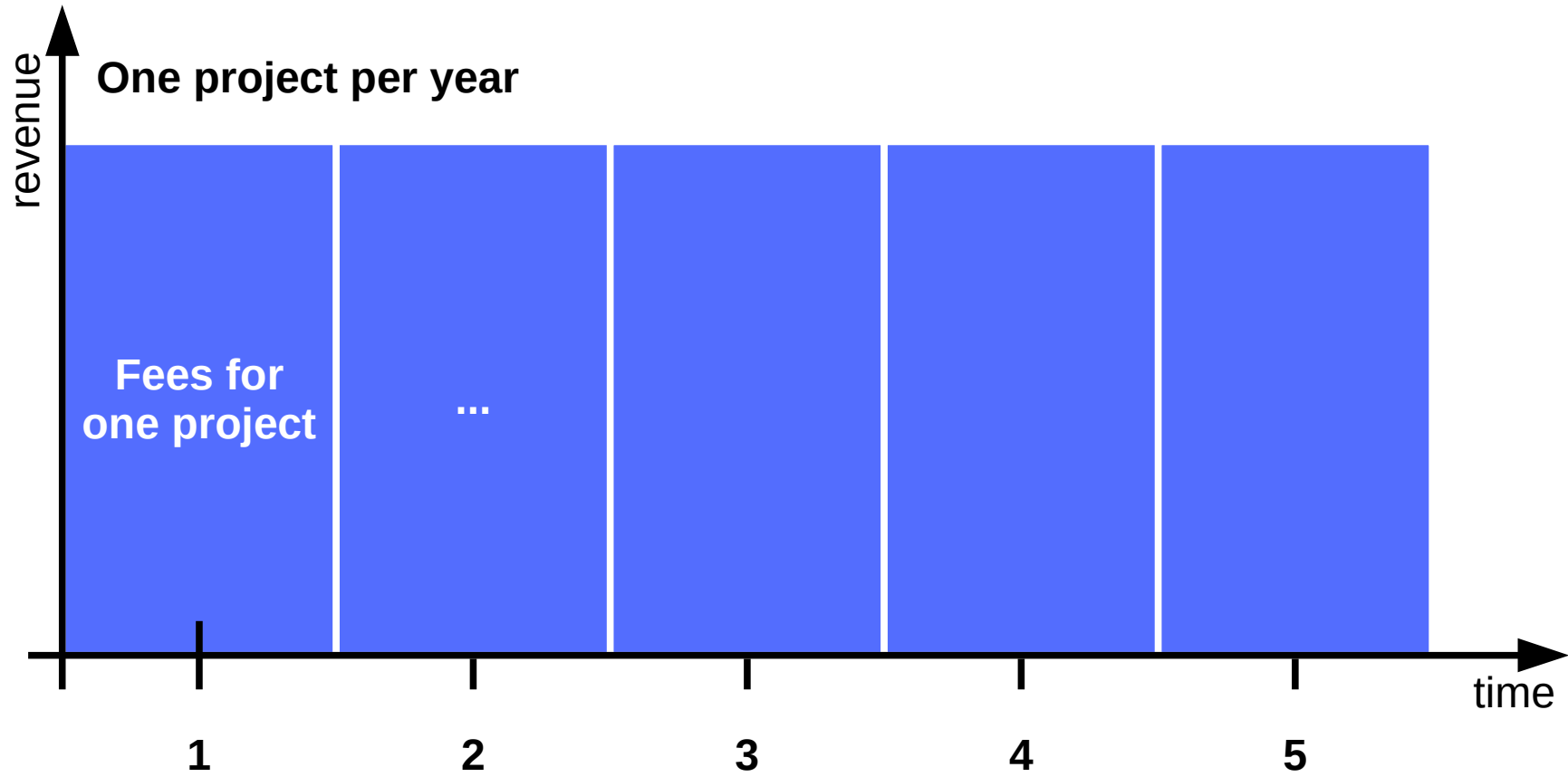
Accumulating Software Subscription Revenue



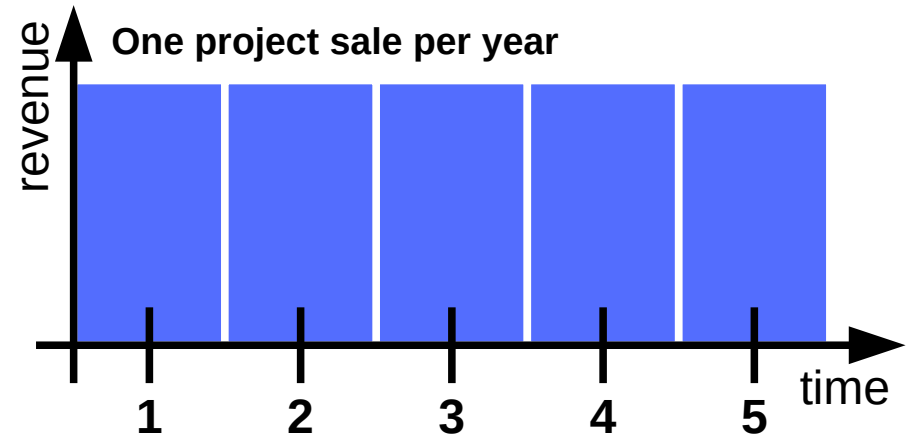
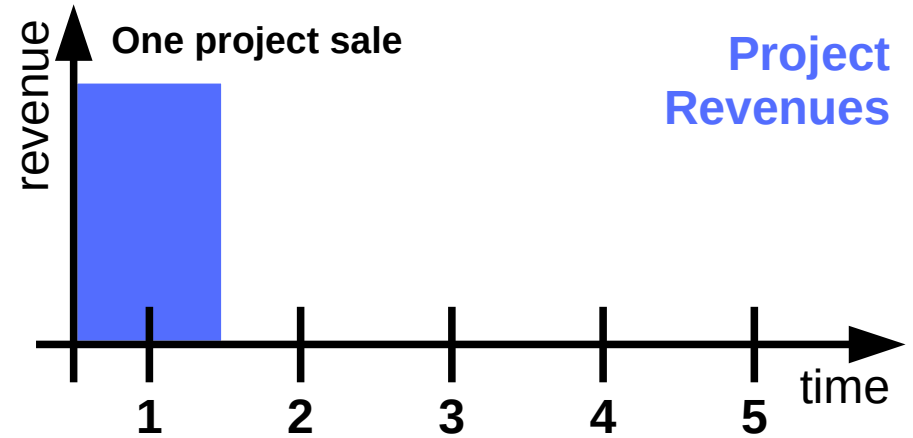
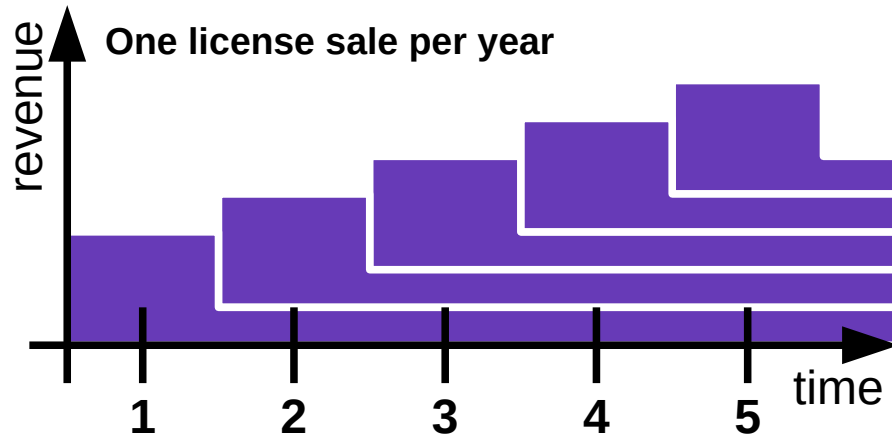
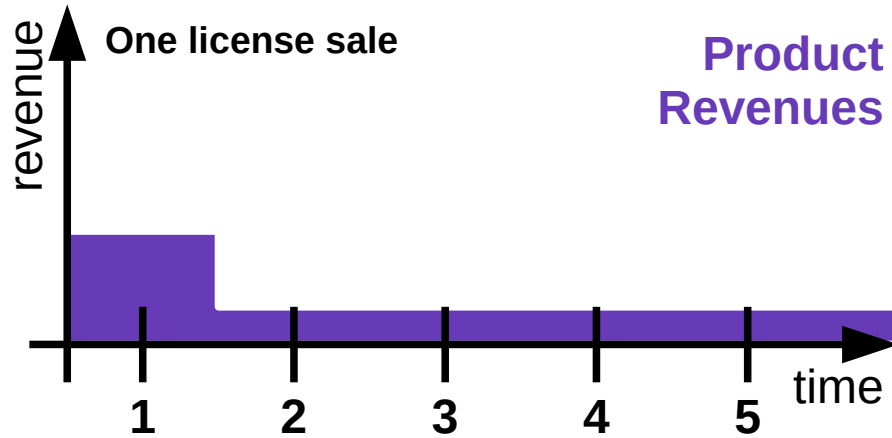
Software Projects

- A **project** is an undertaking that
 - Has a process with a defined start and a defined end
- A **software project** is a project where
 - Revenues correlate with performed labor
 - Fixed price vs. actual labor
 - Accounted for as revenue and expenses
- Some examples projects
 - Bachelor and Master theses
 - Customizing SAP for a customer

Software Project Revenue



Software Product vs. Project Revenue



Software Product vs. Project Firms

	Software vendor	Consulting firm
Advantages	<ul style="list-style-type: none">• Stable revenue• High multiples	<ul style="list-style-type: none">• Not capital intensive• Can be started easily
Disadvantages	<ul style="list-style-type: none">• Hard to get started• Requires investment• May be slow to react• Most fail, few survive	<ul style="list-style-type: none">• Somewhat fragile revenue• Less long-term stability• High business volatility• Limited scalability

3. Business Functions

Organizational Hierarchy

Management					
Sales and Marketing		Product Management (Inbound Marketing)	Engineering		Other (HR, Office, Finances, ...)
Sales	(Outbound) Marketing		Development	Support	
<div></div>	<div></div>	<div></div>	<div></div>		<div></div>
		<div></div>		<div></div>	
		<div></div>	<div></div>	<div></div>	<div></div>

Profit Center vs. Cost Center

- Profit center
 - Generates revenue (“makes money”)
 - Reason why company exists
- Cost center
 - Costs money
 - Hygiene factor

Product Management (Business Functions 1 / 5)

- Roles / titles
 - Strategic product manager
 - Technical product manager (e.g. Scrum product owner)
- Responsibilities
 - Identify and justify new business opportunities
 - Define product vision, roadmap, features

Development (Business Functions 2 / 5)

- Roles / titles
 - Developer
 - Software architect [1]
 - Engineering manager
- Responsibilities
 - Design, implement, and evolve product
 - May also operate product
 - Provide third-level support

Support (Business Functions 3 / 5)

- Roles / titles
 - Support engineer
 - Support manager
- Responsibilities
 - Respond to support requests

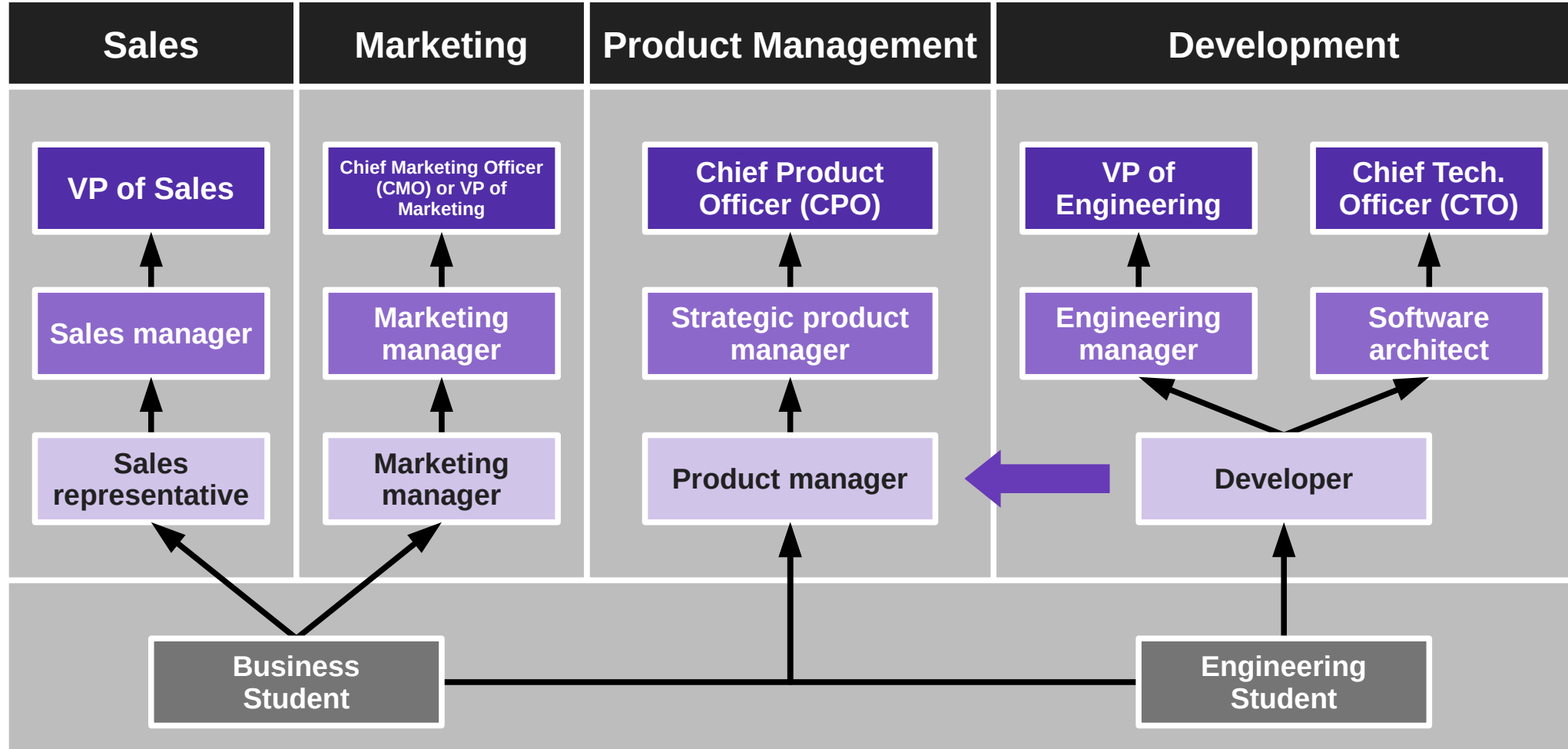
Marketing (Business Functions 4 / 5)

- Roles / titles
 - (Marketeer)
 - Marketing manager
- Responsibilities
 - Generate leads, qualify them
 - Make product known (campaigns, webinars, etc.)

Sales (Business Functions 5 / 5)

- Roles / titles
 - Sales person / representative
 - Sales manager
 - Account manager
- Responsibilities
 - Turn leads into customers

Titles and Careers in a Software Company

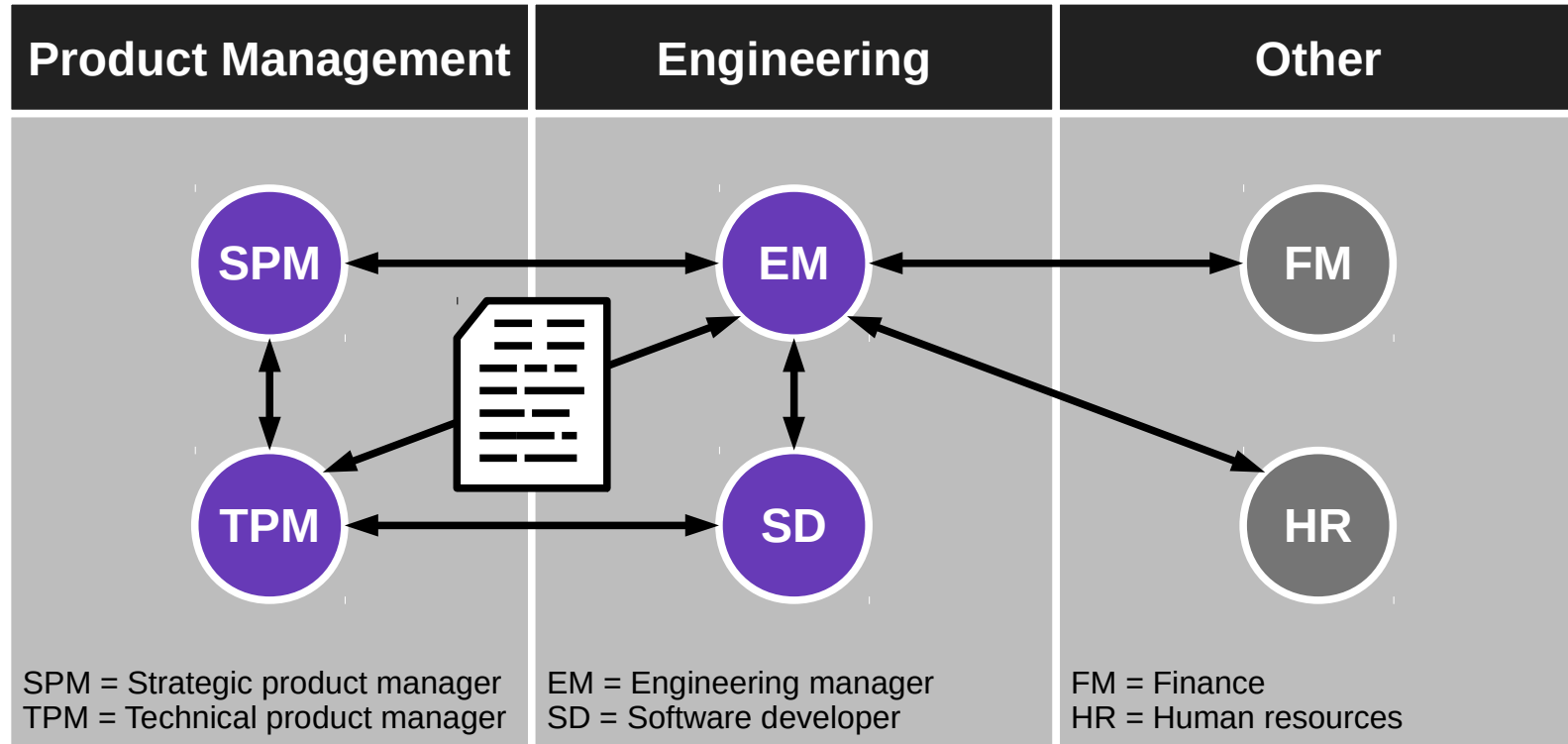


4. Core Business Processes

Core Business Processes

1. Product development
2. Customer acquisition
3. Product operations
4. Product support

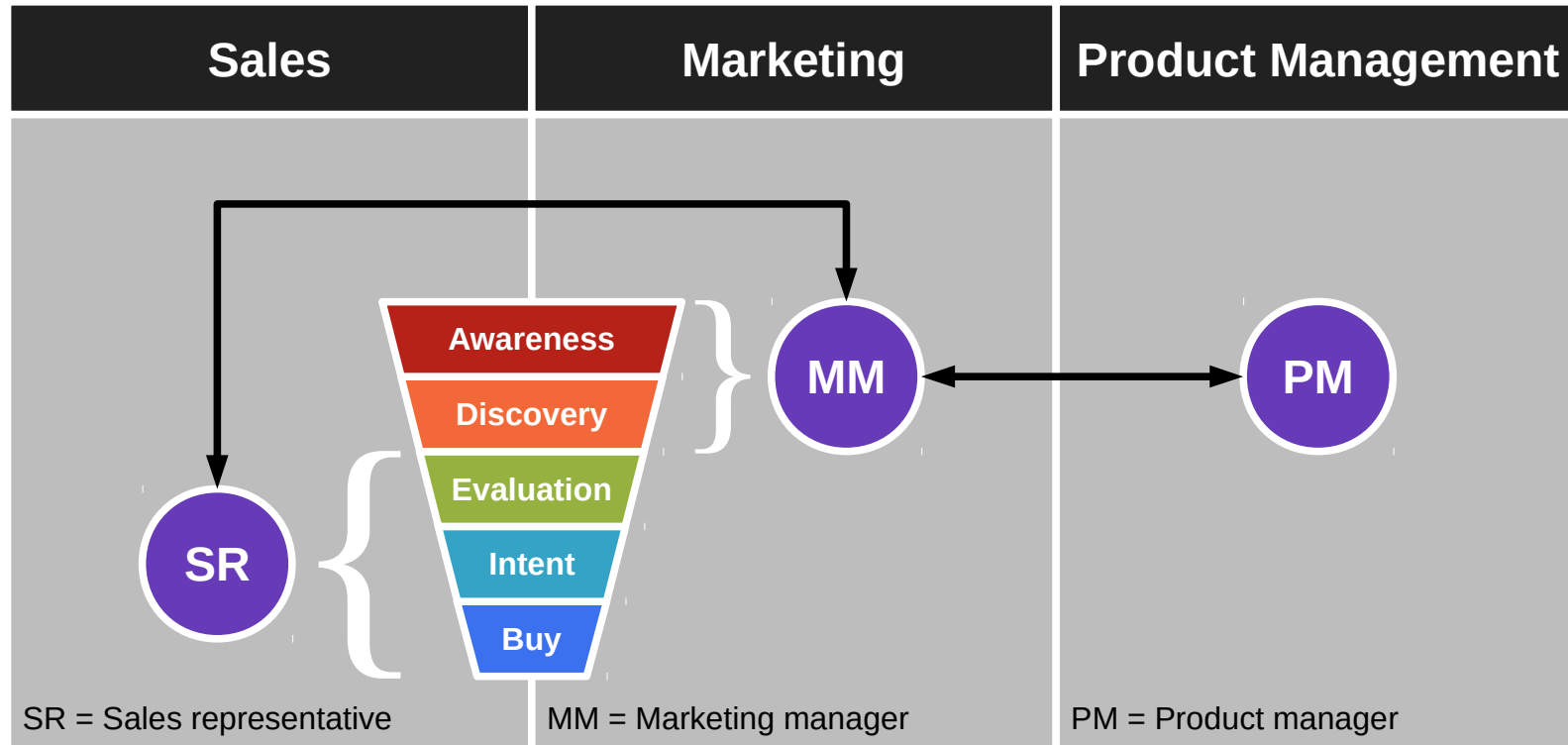
Product Development (Business Processes 1 / 4)



Problems and Solutions to Product Development

- Technical product managers are nowhere to be found
 - The engineering manager usually takes this role
- The IT department gets stuck to product development
 - Just say no (you can't be both a cost and a profit center)

Customer Acquisition (Business Processes 2 / 4)



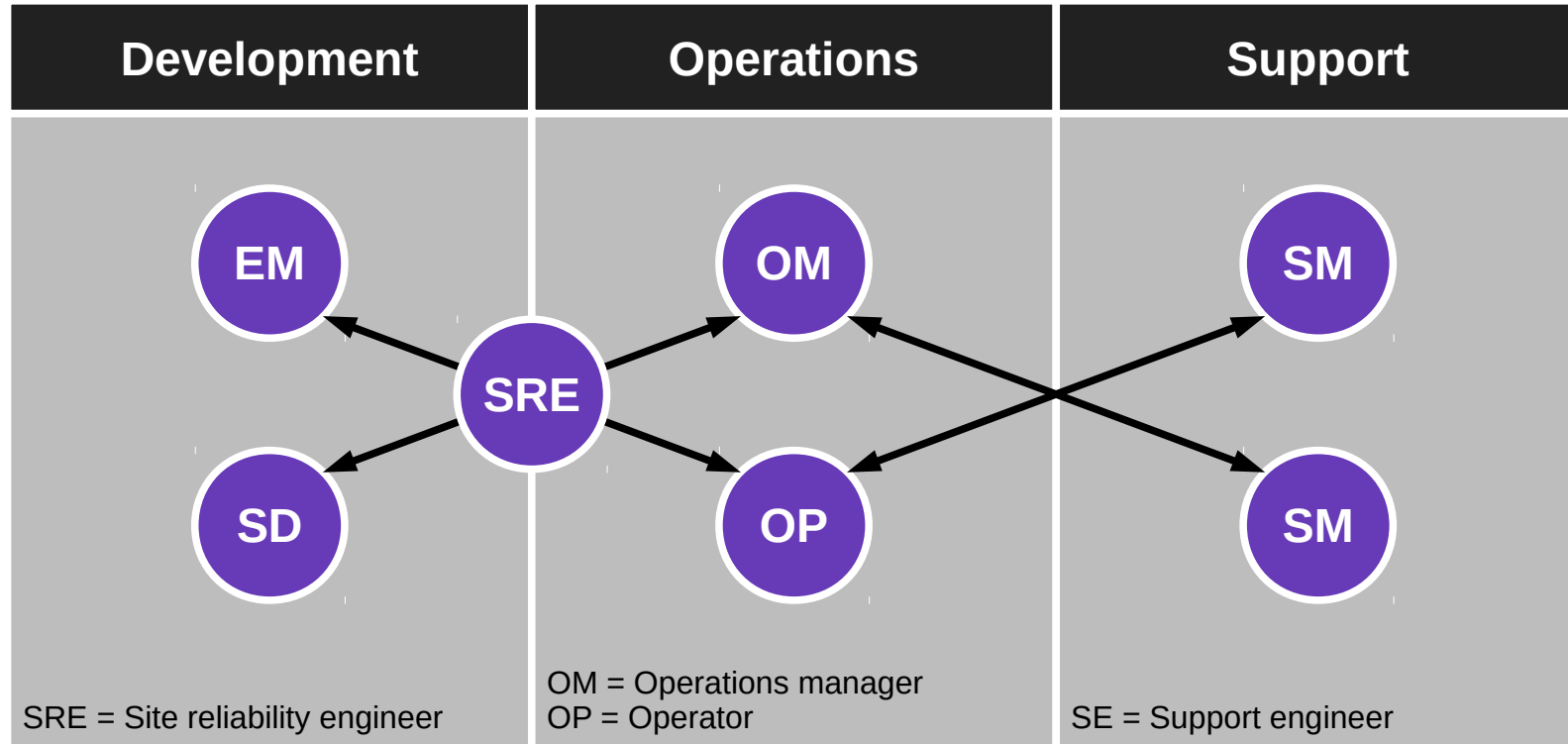
The Sales Funnel



Problems and Solutions to Customer Acquisition

- Marketing people don't generate leads
 - Strategic product manager reviews segments and channels
- Sales people don't understand the new product
 - Explain better, provide stronger incentives, split org. unit
- Sales people keep selling the old product
 - Change incentives, split org. unit

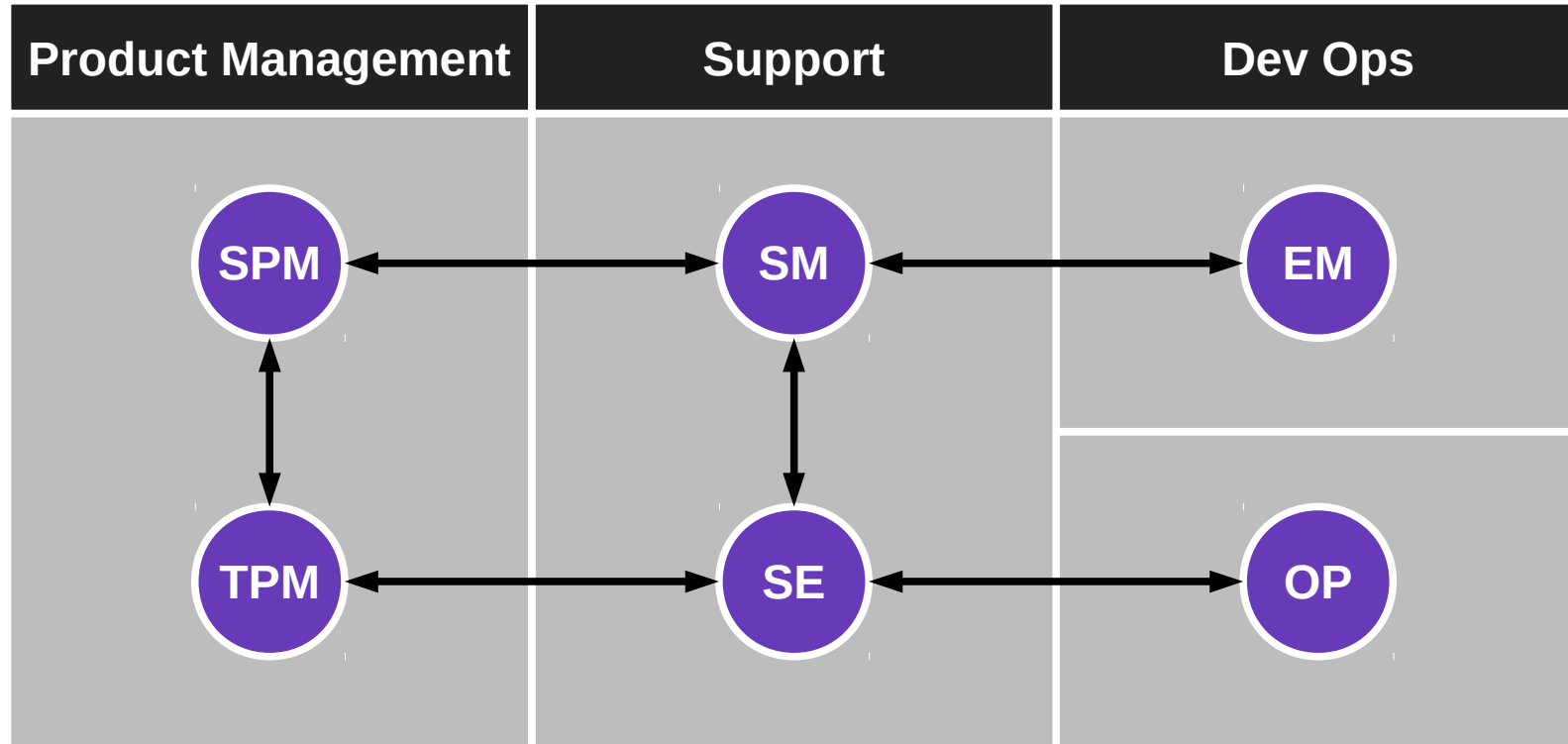
Product Operations (Business Processes 3 / 4)



Problems and Solutions to Product Operations

- Your service simply does not meet reliability requirements
 - In engineering, hire differently
 - Hire for cloud computing skill set
 - Hire for site reliability engineering skill set

Product Support (Business Processes 4 / 4)



5. The Income Statement

The Three Statements of Financial Accounting

- Balance sheet
 - A summary (annual) statement of assets, liabilities, and equity
- Income statement
 - A summary (annual) statement of revenues and expenses
- Cash-flow statement
 - A summary (annual) of flow of cash (and cash equivalents)

The Income Statement

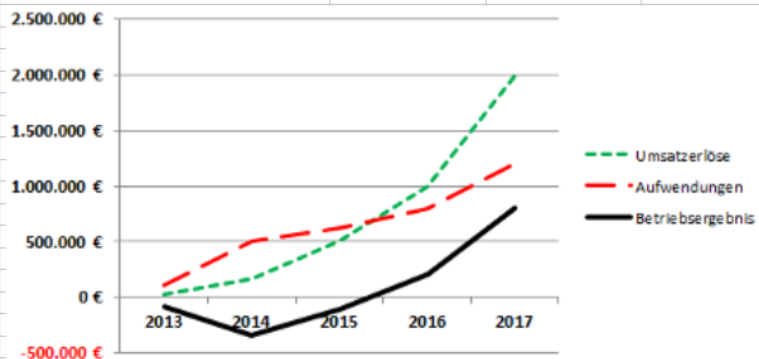
- Basic vocabulary
 - Revenues = income
 - Expenses = costs
 - Profit = revenues - expenses
 - Loss = negative profits

	2011 (\$m)	Percentage
Revenues	\$1.657	100%
Subscription and Support	\$1.551	94%
Professional Services etc.	\$106	6%
Cost of Revenues	\$324	20%
Subscription and Support	\$208	13%
Professional Services etc.	\$116	7%
Gross Profit (and Gross Margin)	\$1.333	80%
Operating Expenses		
Research and Development	\$188	11%
Sales and Marketing	\$792	48%
General and Administrative	\$256	15%
Total Operating Costs	\$1.236	74%
Operating Profit (and Operating Margin)	\$97	6%

Source: Michael A. Cusumano. Reflecting on the Facebook IPO. CACM 10, 2012.

6. Vendor Life-Cycle

Gewinn-und-Verlust-Rechnung			Q1/2013	Q2/2013	Q3/2013	Q4/2013	Q1/2014	Q2/2014	Q3/2014	Q4/2014	Geschäftsjahr 2013	Geschäftsjahr 2014	Geschäftsjahr 2015
	Produkte		0 €	1.500 €	11.250 €	9.750 €	37.500 €	16.500 €	47.500 €	66.000 €	22.500 €	157.500 €	504.750 €
	Dienstleistungen		0 €	300 €	0 €	600 €	1.500 €	0 €	600 €	1.200 €	900 €	2.100 €	3.600 €
Umsatzerlöse			0 €	1.800 €	11.250 €	10.350 €	39.000 €	16.500 €	48.100 €	67.200 €	23.400 €	159.600 €	508.350 €
	Materialaufwand												
	Sonstiger Aufwand												
Herstellungskosten der verk. Erzeugnisse			0	0	0	0	0	0	0	0	0	0	0
Bruttoergebnis			0 €	1.800 €	11.250 €	10.350 €	39.000 €	16.500 €	48.100 €	67.200 €	23.400 €	159.600 €	508.350 €
% Umsatz			#DIV/0!	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Betriebliche Aufwendungen			0 €	20.500 €	20.500 €	69.000 €	109.600 €	109.900 €	130.900 €	153.500 €	110.000 €	503.900 €	623.500 €
% Umsatz			#DIV/0!	1139%	182%	667%	281%	666%	272%	228%	470%	316%	123%
Betriebsergebnis			0 €	-18.700 €	-9.250 €	-58.650 €	-70.600 €	-93.400 €	-82.800 €	-86.300 €	-86.600 €	-344.300 €	-115.150 €
% Umsatz			#DIV/0!	-1039%	-82%	-567%	-181%	-566%	-172%	-128%	-370%	-216%	-23%
Betriebsfremde Erlöse (Aufwendungen)			0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €
Ergebnis vor Steuern			0 €	-18.700 €	-9.250 €	-58.650 €	-70.600 €	-93.400 €	-82.800 €	-86.300 €	-86.600 €	-344.300 €	-115.150 €
% Umsatz			#DIV/0!	-1039%	-82%	-567%	-181%	-566%	-172%	-128%	-370%	-216%	-23%
Steuern von Einkommen und Ertrag			0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €
Jahresüberschuss/Fehlbetrag			0	-18.700	-9.250	-58.650	-70.600	-93.400	-82.800	-86.300	-86.600	-344.300	-115.150
% Umsatz			#DIV/0!	-1039%	-82%	-567%	-181%	-566%	-172%	-128%	-370%	-216%	-23%
Kumulierter Jahresüberschuss/Fehlbetrag			0	-18.700	-27.950	-67.900	-129.250	-164.000	-176.200	-169.100	-172.900	-430.900	-459.450



7. Example Business Models

Business Model

- A business model
 - Is a summary description (model) of how a business' elements and their relationships interact to help the business achieve its strategic goals
 - Example elements are products, partners, people, positions, etc. and example relationships are the processes that govern their interaction

Key Partners

**Key Re-
sources**

**Key
Activities**

**Value
Proposition**

Channels

**Customer
Relationships**

Customer Segments

Cost Structure

Revenue Streams

Summary

1. Products and vendors
2. Projects vs. product firms
3. Business functions
4. Core business processes
5. The income statement
6. Vendor life-cycle
7. Example business models

Thank you! Questions?

dirk.riehle@fau.de – <http://osr.cs.fau.de>

dirk@riehle.org – <http://dirkriehle.com> – [@dirkriehle](#)

Credits and License

- Original version
 - © 2020 Dirk Riehle, some rights reserved
 - Licensed under [Creative Commons Attribution 4.0 International License](#)
- Contributions
 - None yet