

Software Vendors

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COSS B03

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Agenda

1. Products and vendors
2. Projects vs. product firms
3. The financial view
4. Business functions
5. Core business processes

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
- **Non-profit organizations**
 - Standards organizations
 - Regulatory bodies
 - Certification agencies

Core, Basic, and Whole Product (Recap)

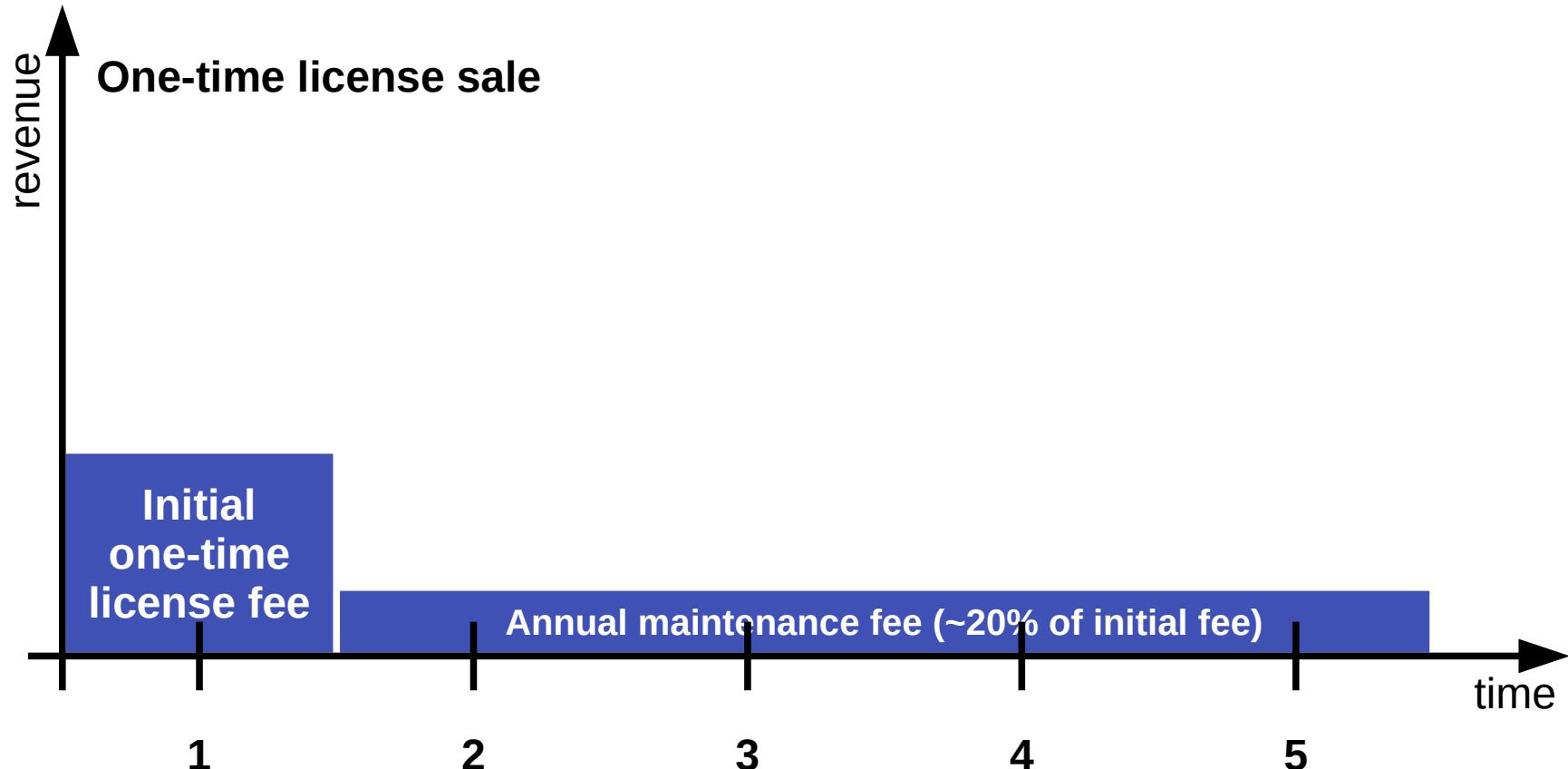
- **Core product =**
 - Core software
 - Additional functionality
 - Complementary artifacts
 - Self-help services
- **Basic product =**
 - Core product +
 - Fitness for use
 - Certification
 - Support services
- **Whole product =**
 - Basic product +
 - Training
 - Consulting
 - Operations

2. Product vs. Project Firms

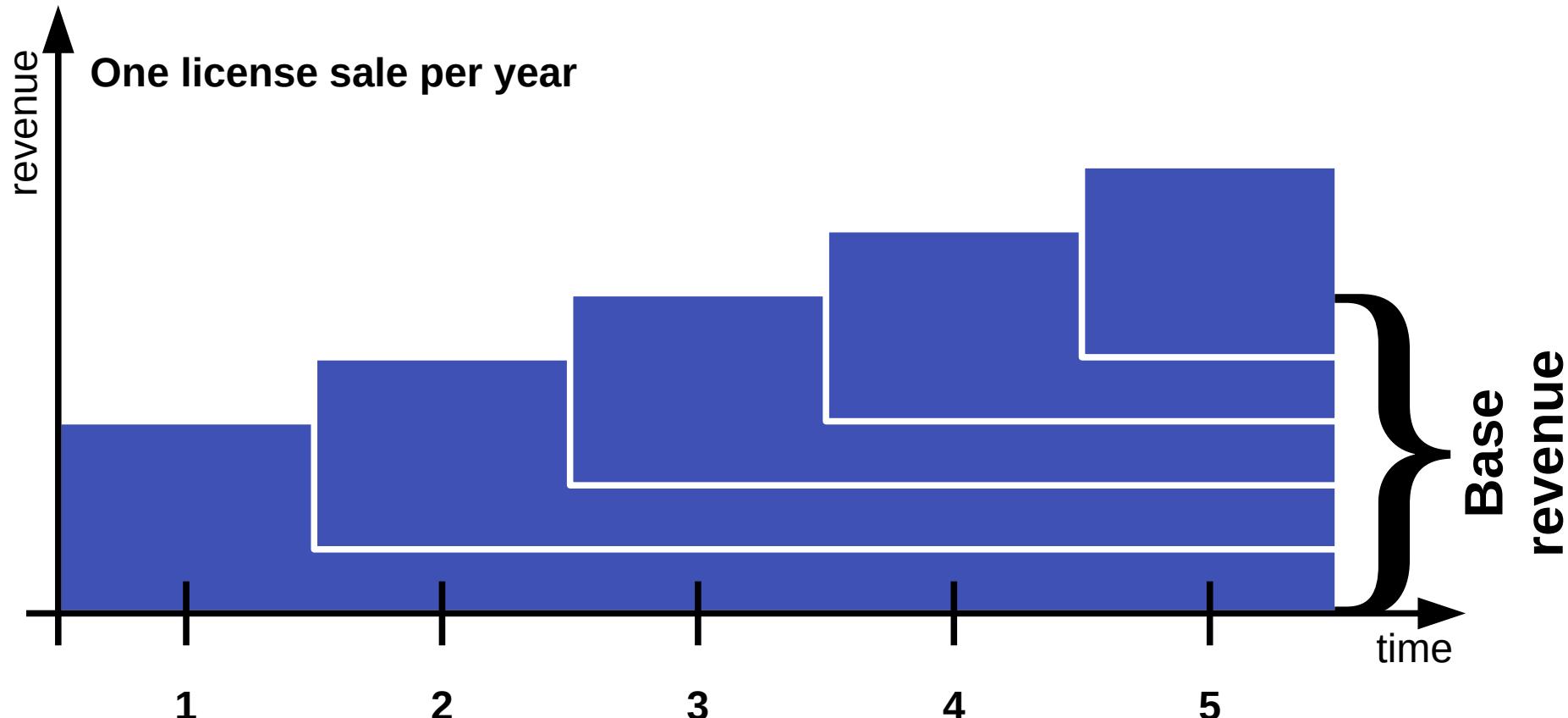
Enterprise Software Products and Projects



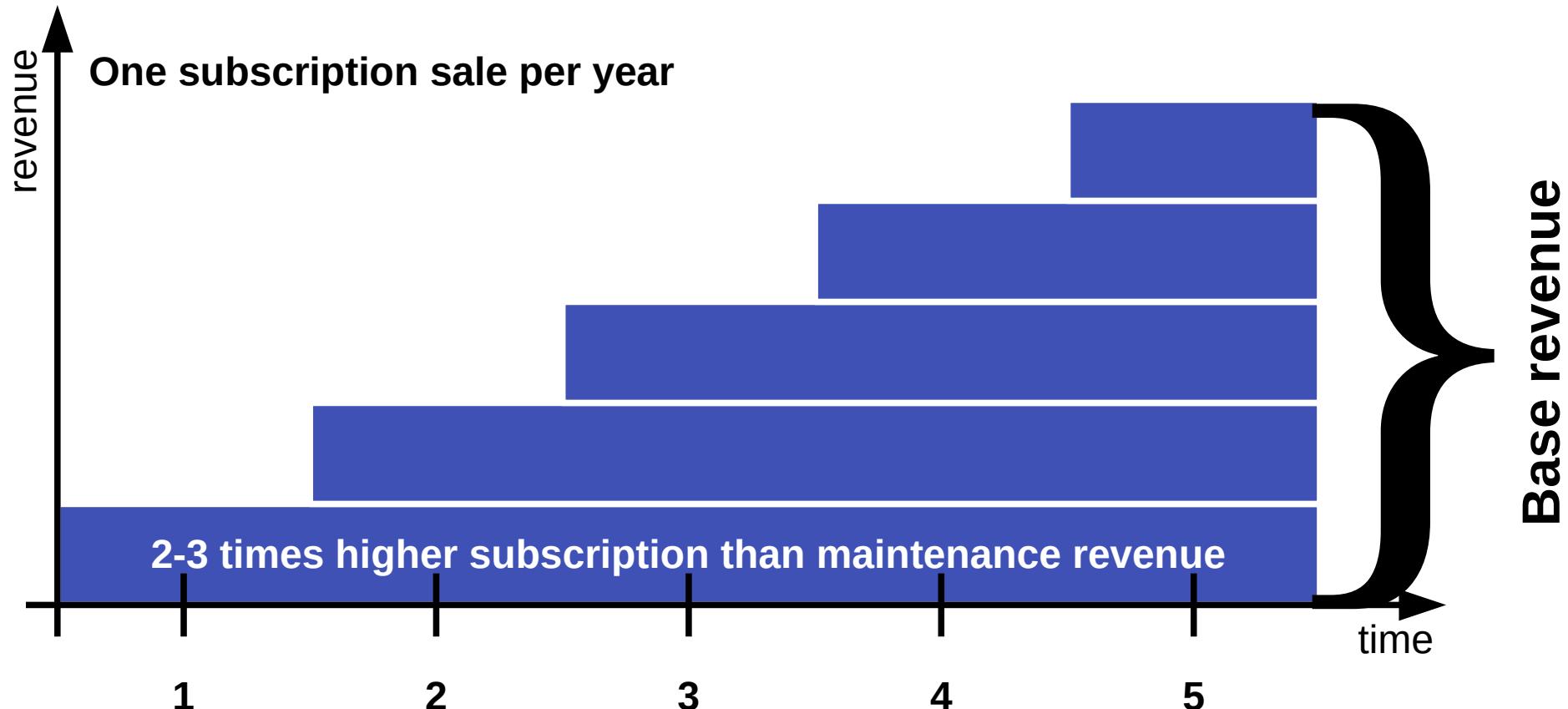
(Traditional) Software Product Revenue



Accumulating Traditional Software Product Revenue



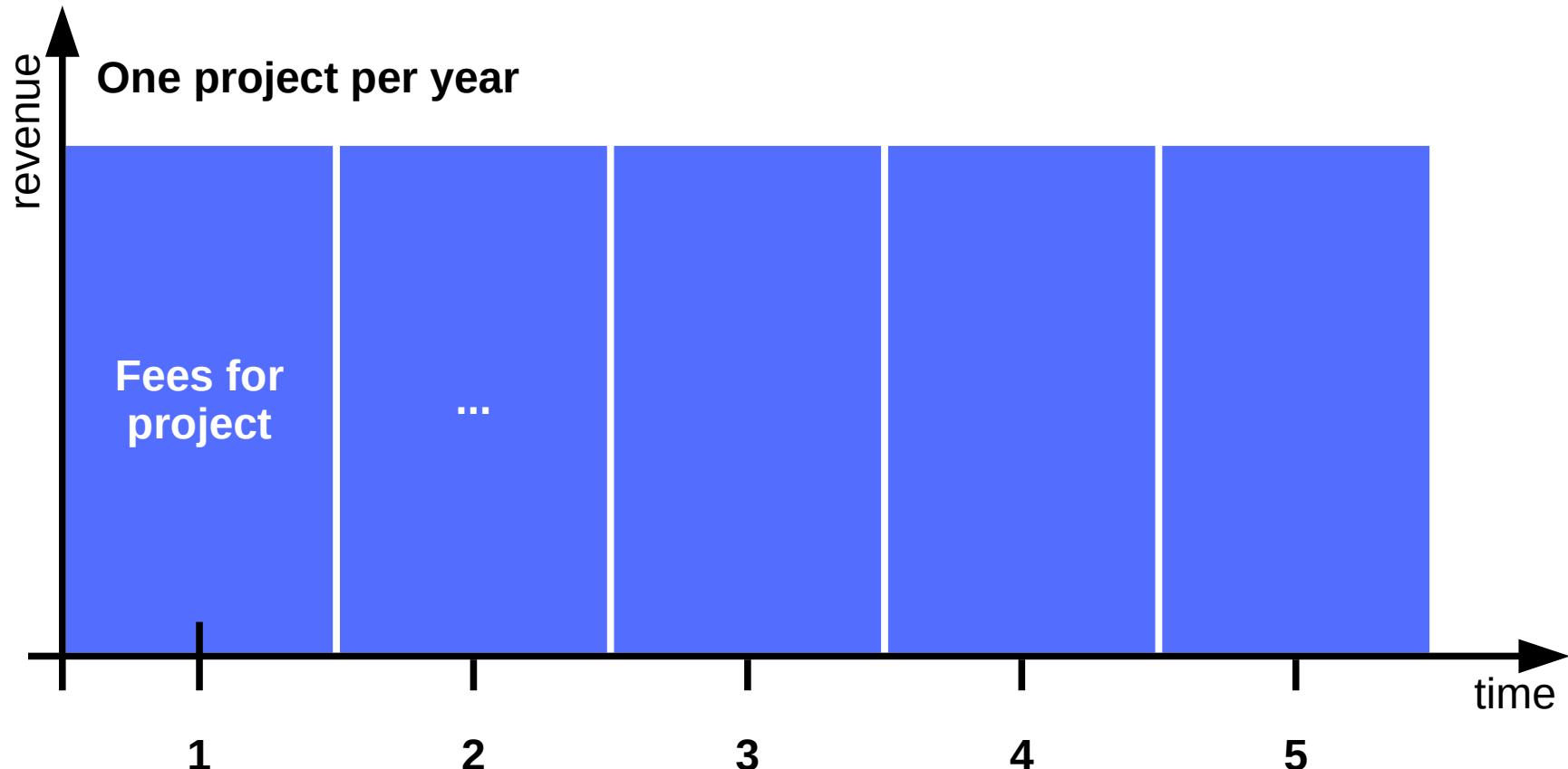
Accumulating Subscription Software Revenue



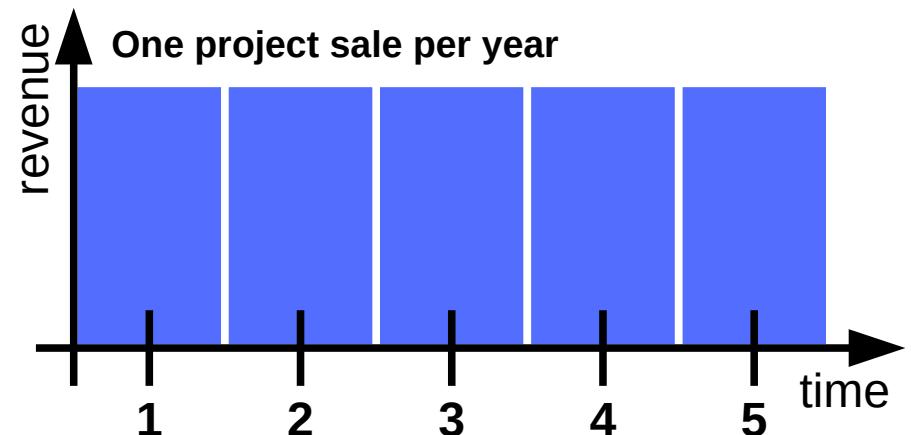
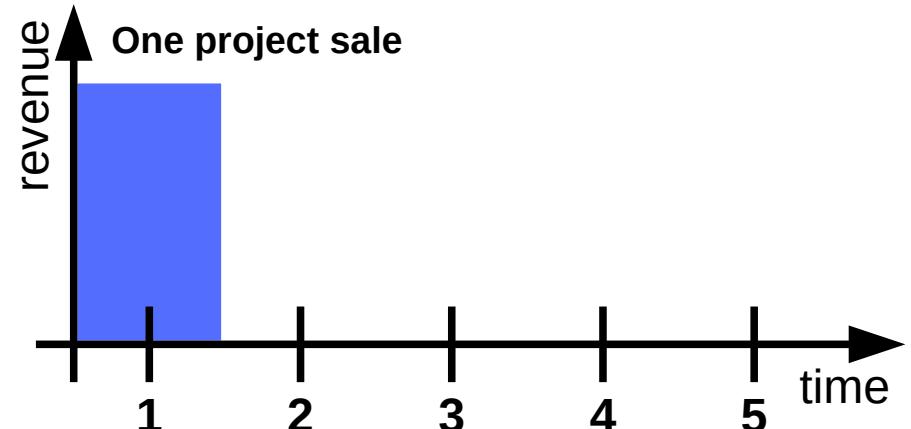
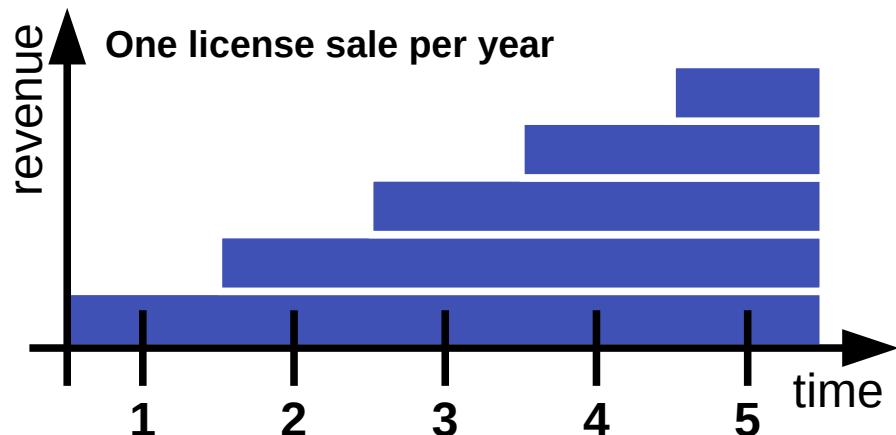
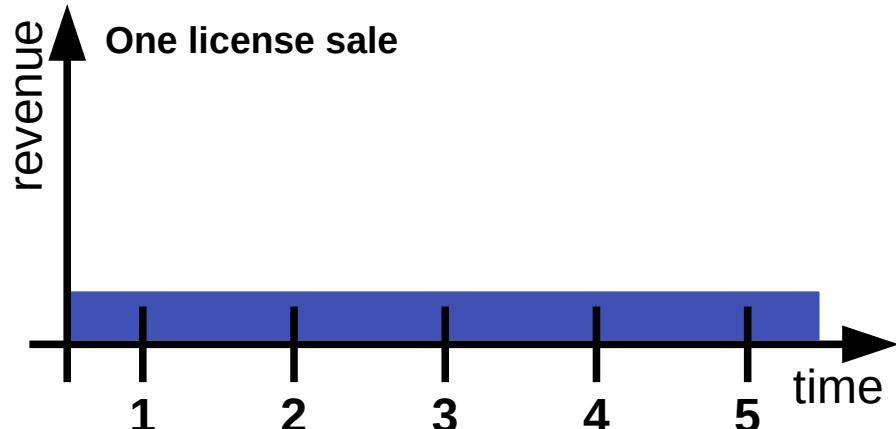
Software Projects

- 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 example 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">• Predictable revenue• High valuation multiples• Non-linear growth	<ul style="list-style-type: none">• Not capital intensive• Can be started easily• Has simple pricing
Disadvantages	<ul style="list-style-type: none">• Hard to get started• Requires investment• Most fail, few survive	<ul style="list-style-type: none">• Somewhat fragile revenue• Higher business volatility• Limited scalability (linear)

3. The Financial View

The Three Statements of Financial Accounting

- Balance sheet (“Bilanz”)
 - A summary (annual) statement of assets, liabilities, and equity
- Income statement (“GuV Rechnung”)
 - A summary (annual) statement of revenues and expenses
- Cash-flow statement (“Mittelflußrechnung”)
 - A summary (annual) of flow of cash (and cash equivalents)

Key Financial Concepts for Software Vendors

- Basic vocabulary
 - Revenues = income (sales)
 - Expenses = costs
 - Profit (loss) = revenues - expenses
- Vendor-specific terms
 - ARR = annual recurring revenue
 - MRR = monthly recurring revenue
 - CAC = customer acquisition cost
 - CLV = customer lifetime value
 - TCV = total contract value

The Rule of 40

- The rule of 40 is a heuristic to understand health / valuation of a SaaS company
 - Free cash flow margin + revenue growth rate
 - Or profit margin + revenue growth rate
 - Should be equal to or greater than 40

	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.

Quiz: Accenture vs. Salesforce (2019)

Metric Ratio	Accenture	Salesforce
Market capitalization	??	??
Revenue	US\$ 43 billion	US\$ 17 billion
Net income [1]	US\$ 4,5 billion	US\$ 0,1 billion
Price-to-sales ratio [2]	??	??
Gross profit margin [3]	30%	74%
Operating profit margin	15%	2,94%
Net profit margin	11%	0,74%
Revenue growth	4,4%	29%
No employees	510.000	49.000

[1] Net income = revenue – (COGS + SGA + operating expenses + depreciation + ... taxes)

[2] Price-to-sales ratio = market capitalization / last year's revenue

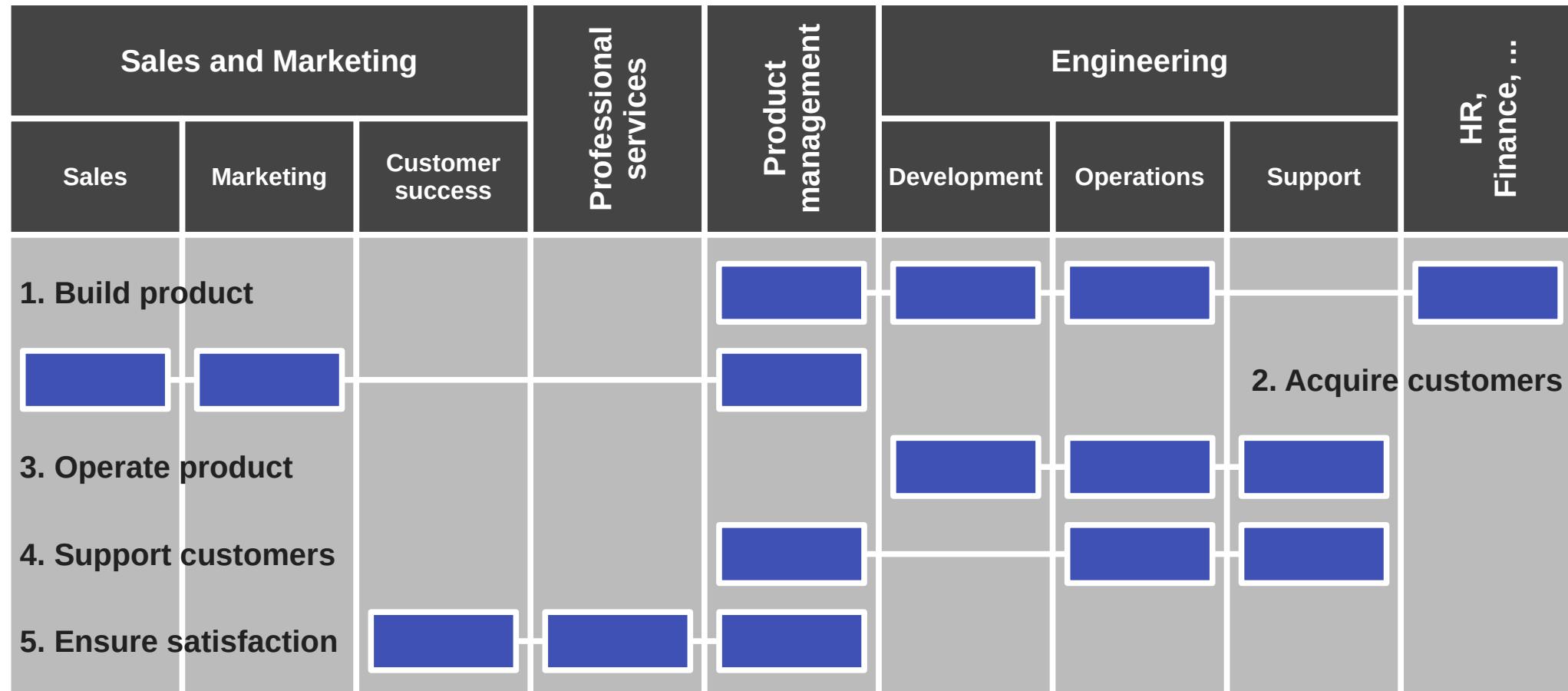
[3] Gross profit margin = (revenue – COGS) / revenue

Accenture vs. Salesforce (2019)

Metric Ratio	Accenture	Salesforce
Market capitalization	US\$ 134 billion	US\$ 144 billion
Revenue	US\$ 43 billion	US\$ 17 billion
Net income	US\$ 4,5 billion	US\$ 0,1 billion
Price-to-sales ratio	3,58	9,06
Gross profit margin	30%	74%
Operating profit margin	15%	2,94%
Net profit margin	11%	0,74%
Revenue growth	4,4%	29%
No employees	510.000	49.000

4. Business Functions

Key Business Functions and Processes



Product Management (Business Functions 1 / 9)

- Roles / titles
 - Chief product officer (CPO)
 - Strategic product manager
 - Technical product manager (e.g. Scrum product owner)
- Responsibilities
 - Identify and justify new business opportunities
 - Define and prioritize product vision, roadmap, and features
- Key stakeholder in
 - Build product
 - Acquire customers
 - Ensure customer satisfaction

Engineering / Development (Business Functions 2 / 9)

- Roles / titles
 - Developer / engineer
 - Software architect [1]
 - Engineering manager
- Responsibilities
 - Design, build, and evolve product
 - Provide third-level support
- Key stakeholder in
 - Build product

Engineering / Operations (Business Functions 3 / 9)

- Roles / titles
 - Site reliability engineer
 - Operations manager
- Responsibilities
 - Operate product
 - Provide third-level support
- Key stakeholder in
 - Operate product
 - Support customers

Engineering / Support (Business Functions 4 / 9)

- Roles / titles
 - Support engineer
 - Support manager
- Responsibilities
 - Respond to support requests
 - Build support automation
- Key stakeholder in
 - Support customers
- May overlap with DevOps

Marketing (Business Functions 5 / 9)

- Roles / titles
 - (Marketeer)
 - Marketing manager
- Responsibilities
 - Create brand awareness
 - Generate demand
 - Generate leads, qualify them
 - Make product known (campaigns, webinars, etc.)
 - Provide competitive intelligence
- Key stakeholder in
 - Acquire customers

Sales (Business Functions 6 / 9)

- Roles / titles
 - Sales person / representative
 - Pre-sales (person)
 - Sales manager
 - Account manager
- Responsibilities
 - Turn qualified leads into customers
 - Drive upsell, cross-sell, and renewals
- Key stakeholder in
 - Acquire customers

Customer Success (Business Functions 7 / 9)

- Roles / titles
 - Customer advocate
 - Customer success manager
- Responsibilities
 - Ensure actual use
 - Improve satisfaction
- Key stakeholder in
 - Ensure customer satisfaction

Professional Services (Business Functions 8 / 9)

- Roles / titles
 - Consultant
 - Project manager
- Responsibilities
 - Help deploy the product (“solution”)
 - Review partner consulting firm (work quality)
 - Help manage consulting ecosystem
- Key stakeholder in
 - Ensure customer satisfaction

Other (Business Functions 9 / 9)

- Human resources
 - Supports hiring
 - Ensures compliance
- Finance
 - Supports operations
 - Manages expenses / costs
 - Helps fundraising
 - Ensures compliance

ORGANIZATION CHART

of

THE TABULATING MACHINE CO.

BOARD OF DIRECTORS - C-T-R-CO.

Alfred DeBuys	Clarence P. King
George W. Fairchild	Stacy C. Richmond
Charles R. Flint	Joseph E. Rogers
A. Ward Ford	Christopher D. Smithers
Oscar L. Gubelman	Thomas J. Watson
Samuel M. Hastings	George I. Wilber
John W. Herbert	Rollin S. Woodruff
Joel S. Coffin	

OFFICERS-C-T-R-CO.

Thomas J. Watson - Pres. & Genl. Mgr.
George W. Fairchild - Vice-President
James S. Ogsbury - Secy & Treasurer

COMPUTING-TABULATING-RECORDING CO.
Offices - 50 Broad St. - New York City

THE TABULATING MACHINE CO.

General Offices —— 50 Broad St.
New York City

FACTORIES — WASHINGTON, D.C.
— ENDICOTT, N.Y.
— DAYTON, O.

THOMAS J. WATSON President
R.L. Houston General Manager

OFFICERS
Thomas J. Watson — President
Gershon Smith — Vice-President
R.L. Houston — Treasurer
W.D. Jones — Asst. Treasurer
James S. Ogsbury — Secretary
O.E. Braitmayer — Asst. Secretary

MANUFACTURING
O.E. Braitmayer
Swift Boykin - Chief Clerk

Production Operating Machines	Production Cards	Maintenance Machines	Plant Maintenance	Purchasing
J.J. O'Brien Elmer Oldroyd	J.E. Braitmayer	Taylor Garnett	J.E. Braitmayer	O.E. Braitmayer

SYSTEMS
Gershon Smith
Pierre Bonetcou

INVESTIGATION and RESEARCH
Survey and study of industries not using machines at present.
Study of present uses of machines.
Distribution of information to field force.

SCHOOLS

Training of new men in Classes

GENERAL EDUCATION

BOSTON DISTRICT

NEW YORK DISTRICT

PHILADELPHIA DISTRICT

CLEVELAND DISTRICT

ADVERTISING

ACCOUNTING

ORDERS

COSTS

SALES RECORDS

MAILING & FILING

FINANCIAL

ENGINEERING

Boston Office
Springfield Office
Worcester Office
Providence Office

J. L. Hyde
New York Office
Syracuse Office
Scranton Office
Altoona Office

P. D. Merrill
Cleveland Office
Detroit Office
Cincinnati Office
Pittsburgh Office
Pittsburgh Office

General Publicity
House Organs
Booklets
Pamphlets
Circulars
Catalogs
Layouts
Copy
Cuts
Illustrations

Billing
Cost Accts.
Collections
Accts. Payable
Cashier
General Books
Financial Reports

Examination of specifications
Recording of orders
Filing of contracts

Producing Machines
Maintaining machines
Producing cards
Selling cards

Statements Comparisons
Mailing Filing Inquiries
Advertisers Lists
Users Lists

CHICAGO DISTRICT

WASHINGTON DISTRICT

ST. LOUIS DISTRICT

SAN FRANCISCO DISTRICT

SPECIAL

C. L. Hayes

M. W. Sheldon

E. C. Richter

C. W. Stoddard

H. D. Coates
C. J. Quackenbush

Chicago Office
Des Moines Office
Indianapolis Office
Milwaukee Office
Minneapolis Office

Washington Office
Baltimore Office
Atlanta Office

St. Louis Office
Houston Office
Kansas City Office
Dallas Office

San Francisco Office
Los Angeles Office
Seattle Office

AUDITING MACHINE CO.
Thos. J. Watson — President

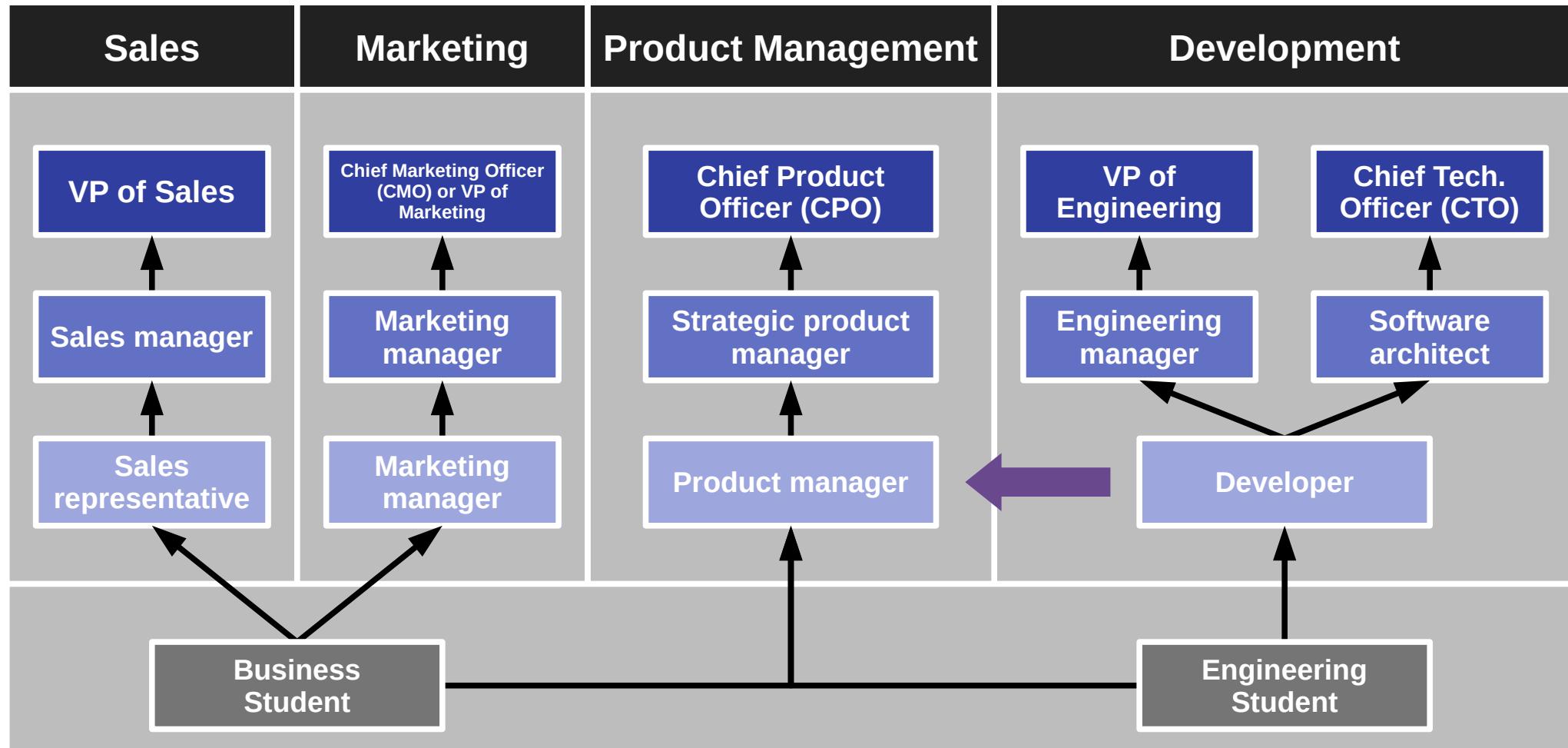
DIRECTORS
Geo. W. Fairchild
Herman Hollerith
Thos. J. Watson

OFFICERS
Thos. J. Watson — President
Gershon Smith — Vice-President
O.E. Braitmayer — Treasurer
Jas. S. Ogsbury — Secretary

FOREIGN

The Canadian T.M.C., Ltd.	The British T.M.C., Ltd.	The I.T.R. Co. of Delaware	Foreign
Switzerland	Canada	United Kingdom of Great Britain and all colonies (except Canada)	France Belgium Portugal Spain Italy Holland
Denmark	Norway	South America Central America Russia Japan China	

Titles and Careers in a Software Company

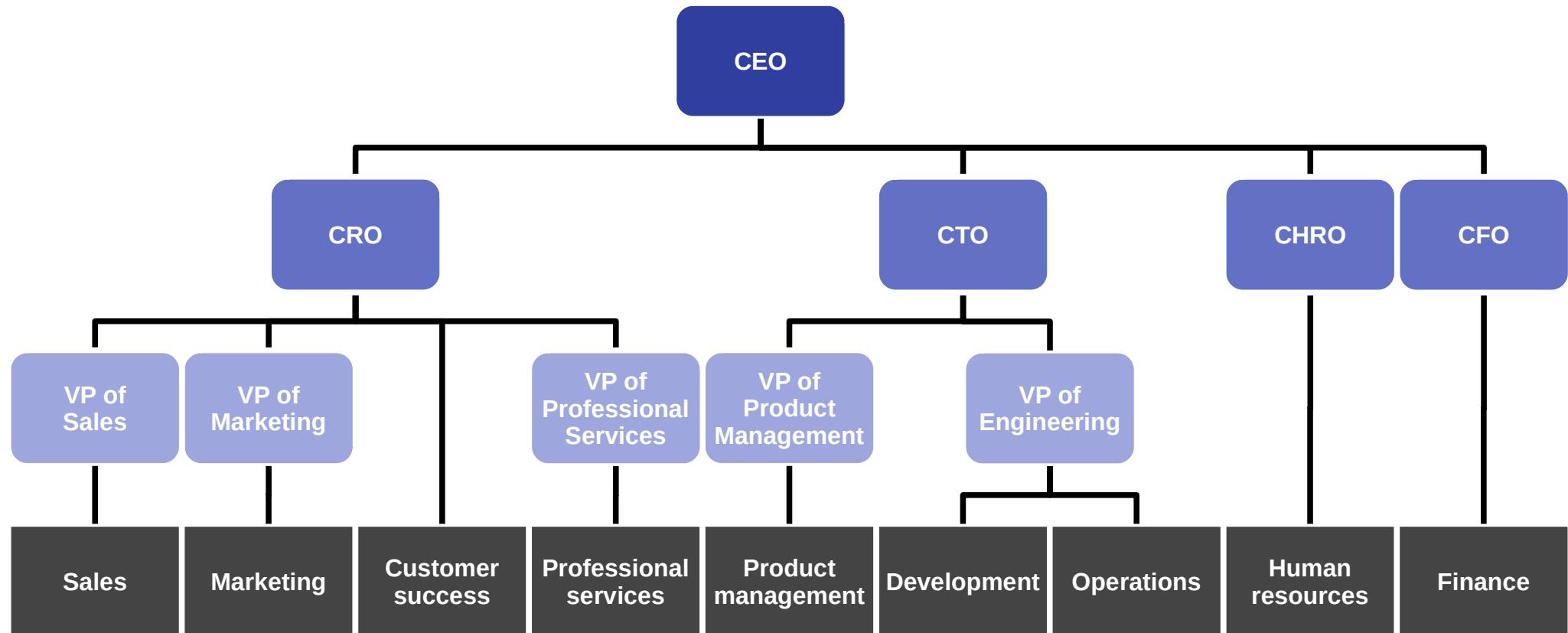


5. Core Business Processes

Profit Center vs. Cost Center

- Profit center
 - Generates revenue (“makes money”)
 - Reason why company exists
- Cost center
 - Costs money
 - Needed to operate (“hygiene factor”)

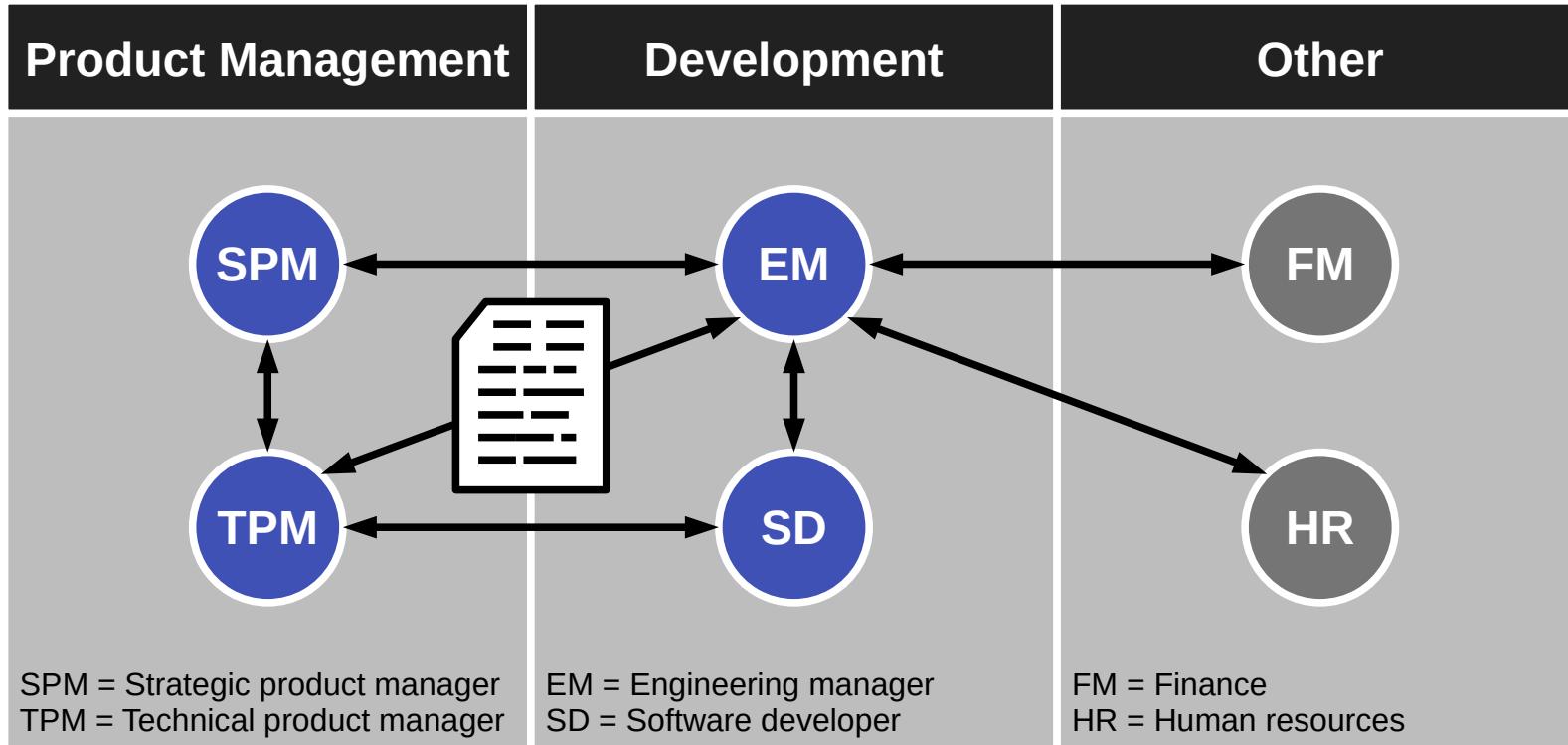
Managerial Hierarchy (Line Reporting)



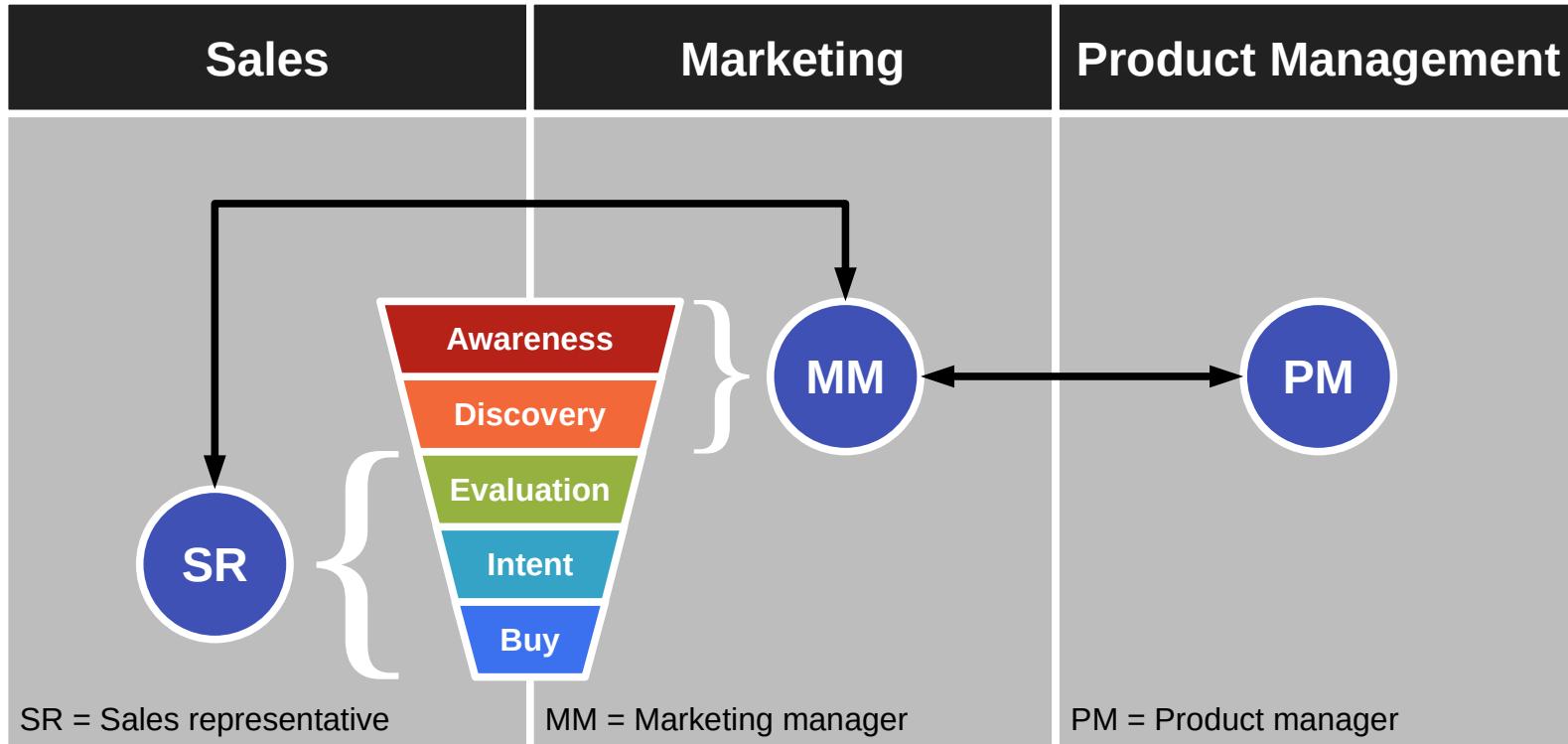
Core Business Processes

1. Product development (“build product”)
2. Customer acquisition (“acquire customers”)
3. Product operations (“operate product”)
4. Customer support (“support customers”)
5. Customer success (“ensure customer satisfaction”)

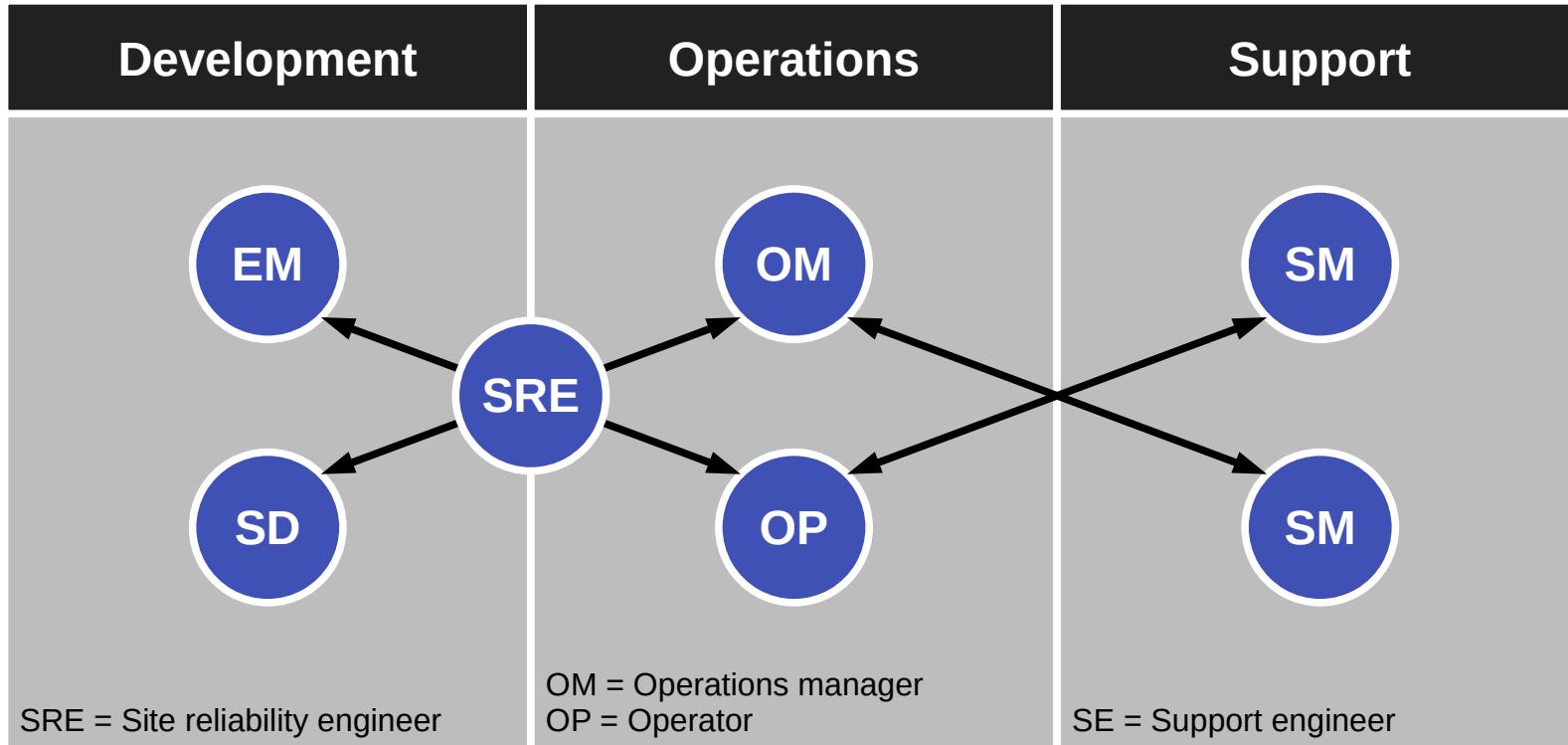
Product Development (Business Processes 1 / 5)



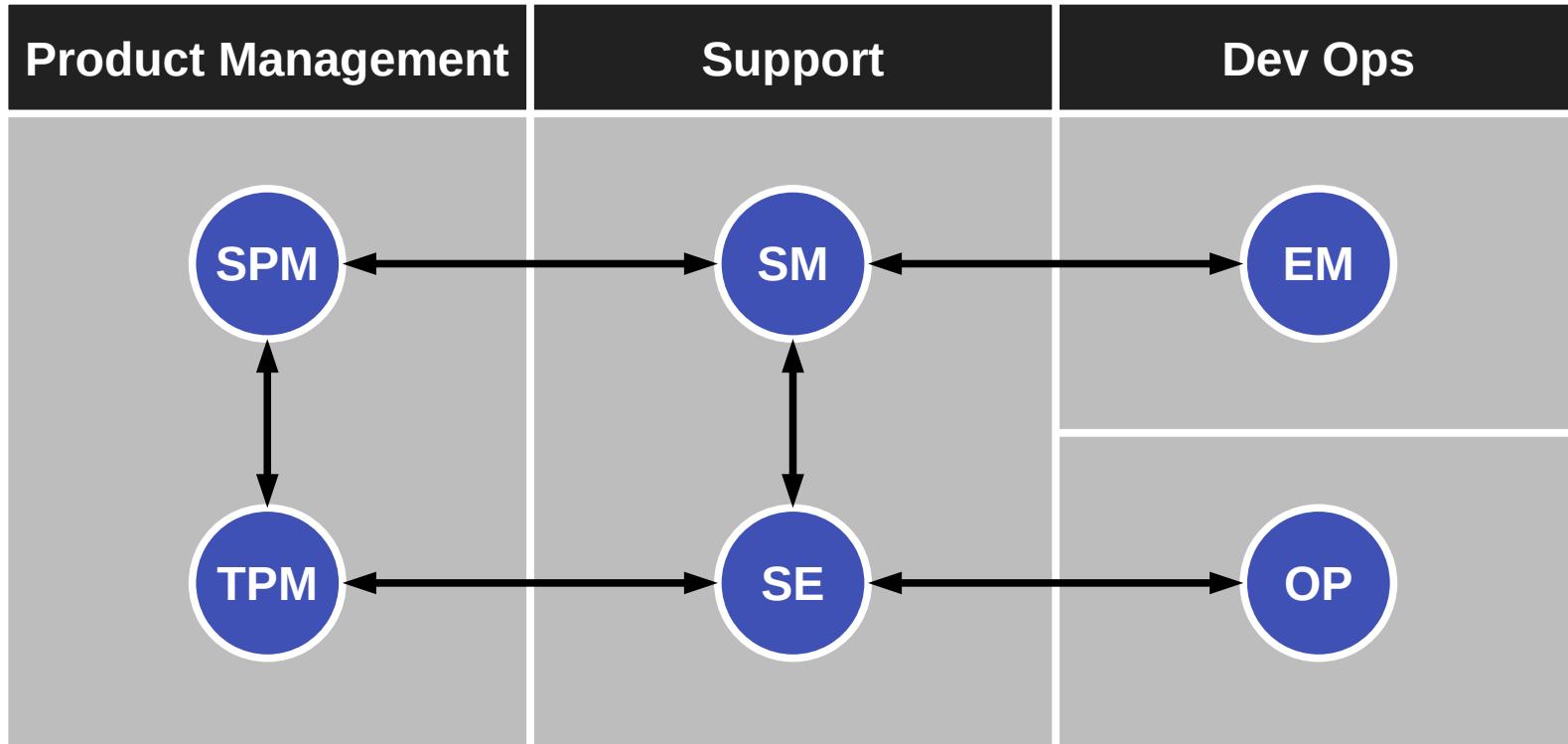
Customer Acquisition (Business Processes 2 / 5)



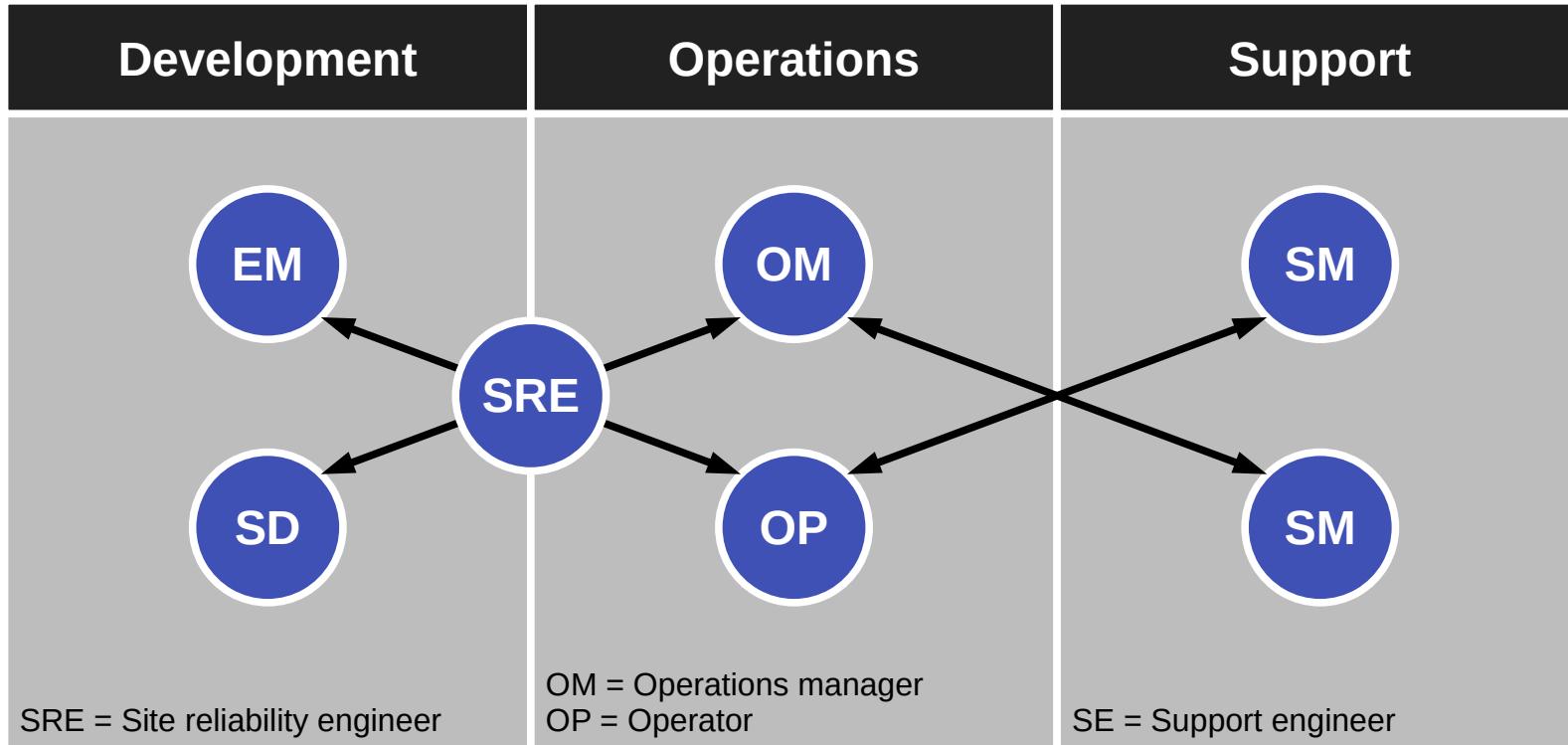
Product Operations (Business Processes 3 / 5)



Customer Support (Business Processes 4 / 5)



Customer Success (Business Processes 5 / 5)



Summary

1. Products and vendors
2. Projects vs. product firms
3. The financial view
4. Business functions
5. Core business processes

Thank you! Questions?

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