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software development

Cost Center Disease

The Cause and the Cure

mary@poppendieck.com   Mary Poppendieck   www.poppendieck.com

The Four Stages of Cost Center Disease

1. Specialization
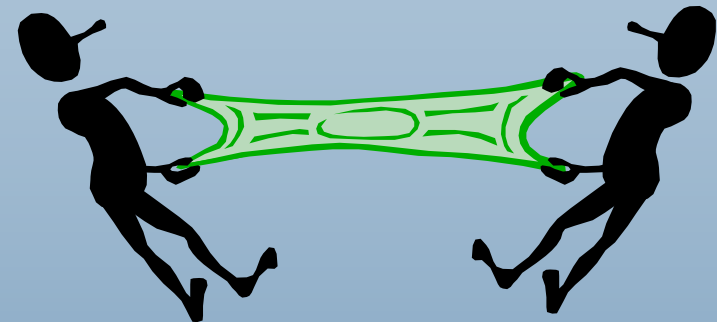
3. Efficiency

2. Project Focus

4. Deterioration

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Cost Center Disease

Focus on cost reduction instead of delivering value

Where is Cost Center Disease most likely?

- ✓ IT departments
- ✓ Government Organizations
- ✓ Sometimes Consulting Firms

Precursors of Cost Center Disease:

- ✓ Weak connection to business results
- ✓ Little or no competition
  - ✗ No driver for relentless improvement
- ✓ Incentive structure favors low risk over innovation
  - ✗ "It is better to fail conventionally than to succeed unconventionally." (Keynes)

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The Causes of Cost Center Disease

## 1. **Local Sub-optimization**

Departmentalization

- ✓ Local results are optimized
- ✓ The cost of crossing boundaries increases costs – by up to 30%

Project Thinking

- ✓ Proxy goals are not business goals
  - ✖ No basis for trade-off decisions
  - ✖ No focus on superior customer outcomes
- ✓ A short term perspective prevails

Efficiency Focus

- ✓ You can't spend money to make money
- ✓ A fear of layoffs demoralizes workers

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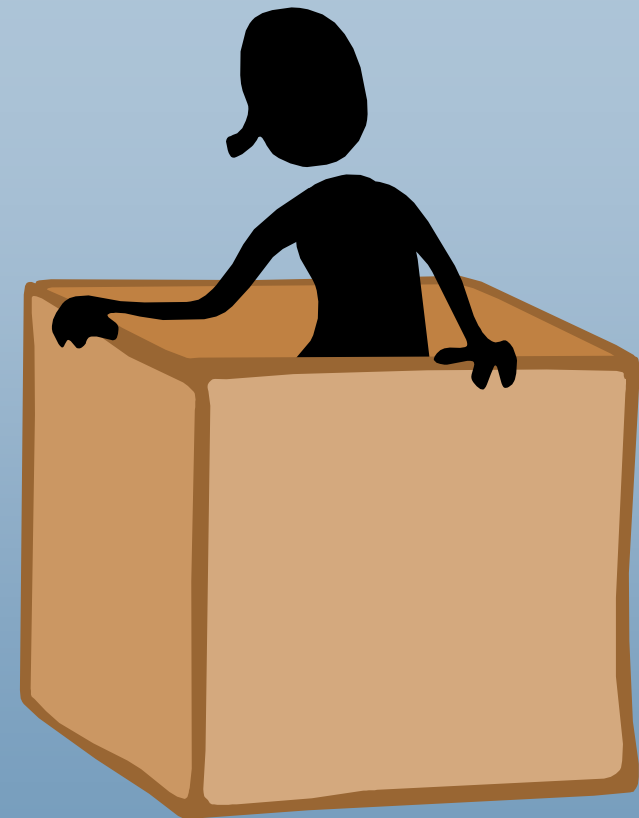
Appreciate the System

Zara: Fashion clothing

✓ Design-to-Store in 2 weeks.

✓ Twice-weekly orders.

　✗ Delivers globally 2 days after order

　　➢ On hangers, priced, ready to sell

　　➢ Shipping prices are not optimized!

✓ Manufactures in small lots

　✗ Mostly at co-ops in Western Spain

　　➢ At Western European labor rates…

RESULTS	Zara	Industry
New Items introduced / year	11,000	3,000
Items sold at full price	85%	60-70%
Unsold Items	<10%	17-20%
% sales spent on advertising	0.3%	3-4%
% sales spent on IT	0.5%	2%

Svenska Handelsbanken

1970: Jan Wallander became CEO

Focus on profitability, not growth.

Decisions devolved to branch managers: independent agents who make all decisions for their branch.

Small central staff that must sell services to branch managers.

Measurements:
　　Cost-to-income ratio
　　Income per employee

Company-wide profit sharing.

Result: Top European bank that easily weathers economic storms.

### *This is Systems Thinking.*

The Causes of
Cost Center Disease

2. **Disconnecting The Development team from Customers**

Brilliant Systems are the result of a matching of mental models between those developing a system and those whose job will be made easier by the system.

The development team must be directly engaged in delivering superior customer outcomes.

Often our project management and governance systems prevent this from happening.

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Case Study:

being Agile@IBM
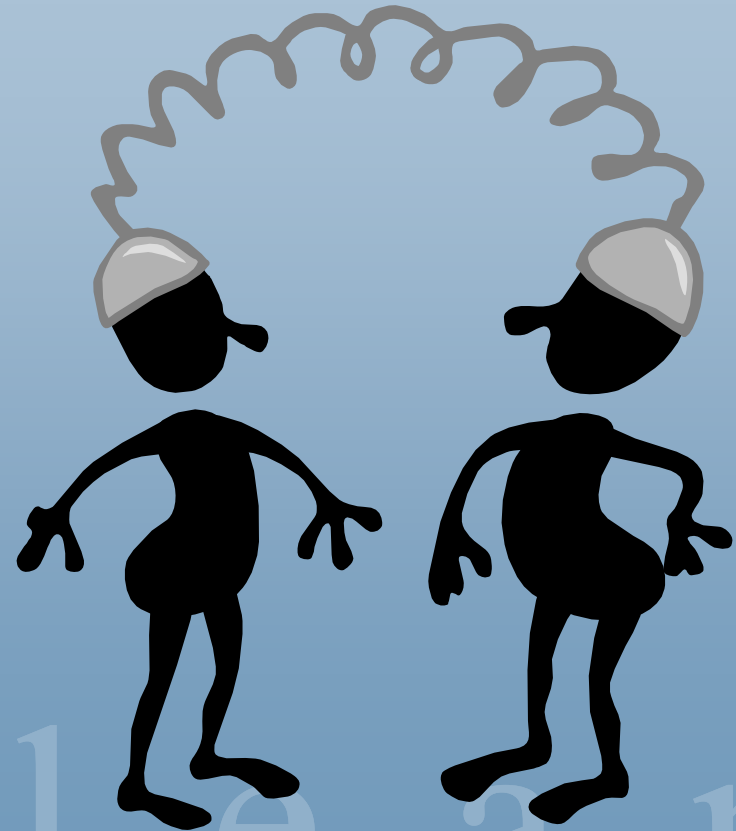
WebSphere® Service Registry and Repository

Pilot Project

- ✓ 10 month deadline – didn't know the details
  - ✗ Solution: Get customer feedback

The Definition of Agile:

- ✓ Early Access Program
  - ✗ Customers download new version each month

Short, Stable Iterations

- ✓ User feedback on discussion forum
  - ✗ Direct developer-customer interaction

Stakeholder Feedback Every Iteration

- ✓ Changed course midstream
  - ✗ User feedback beat marketing input

- ✓ Phenomenal sales the first day of release
  - ✗ Customers knew they would get what they needed

- ✓ Support Calls down by an order of magnitude
  - ✗ Mental model of users and developers matched

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Lessons Learned
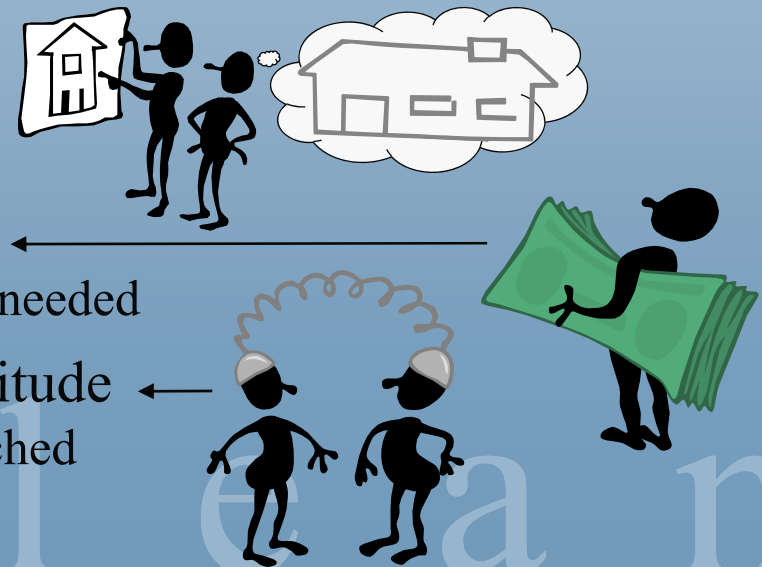
Results:

1. **Higher Quality**
2. **Earlier value for Customers**
3. **Higher Income for Brands**
4. **Greater Job Satisfaction**

Lesson 1:

Connect Customers Directly with the Development Team

"Support calls are caused by a difference in the mental model of the developer and the user."

"Developers get regular feedback from their customers who really care about what they are doing. That makes it fun to come to work every day."

## Lesson 2:

Focus on Customer Outcomes

"Sales on the first day were phenomenal."

"We are delivering more of the right content."

The Biggest Problem?

The Governance system

"If you are going to take into account stakeholder feedback, you cannot commit ahead of time to 100% of what you are going to do. You can only commit to 50% or occasionally 70% of what will be delivered in a release."

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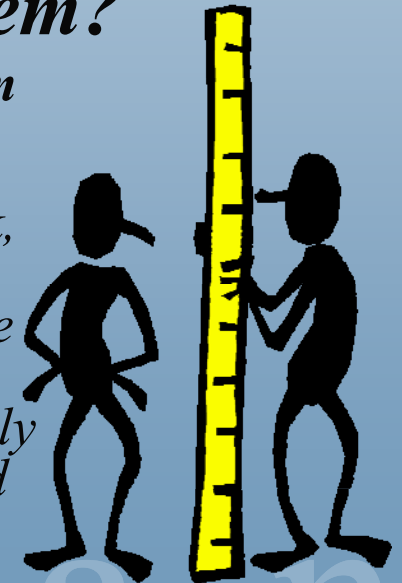
The Causes of Cost Center Disease

## 3. A People-as-Resources Mentality

"Lay Off the Layoffs"
(by Jeffrey Pfeffer, Newsweek, 11/15/10)

On Sept. 12, 2001, there were no commercial flights in the United States. Almost immediately, all the U.S. airlines, save one, began announcing tens of thousands of layoffs. Today the one airline that didn't cut staff, Southwest, still has never had an involuntary layoff. It's now the largest domestic U.S. airline and has a market capitalization bigger than all its domestic competitors combined.

As its former head of human resources told me:

"If people are your most important assets, why would you get rid of them?"

Southwest has 37 consecutive years of profits.
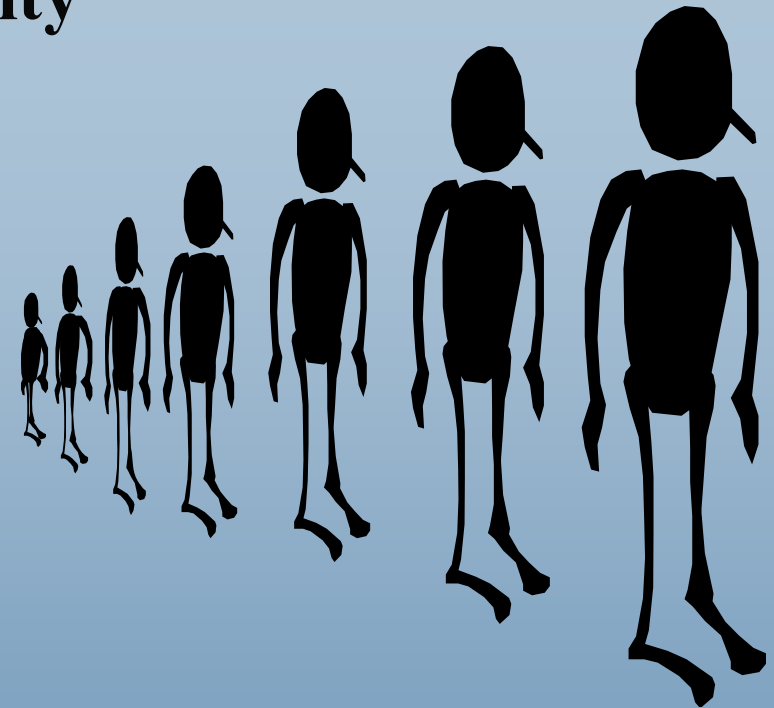
✓ Layoffs don't deliver anticipated savings

✓ Layoffs reduce morale and increase fear

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The secret to success is to take good care of your employees, because then they will take good care of your customers, and satisfied customers lead to a successful business.

Focus on three things: Create a great place to work, provide customers with what they really want, and make sure that the airline always makes a profit so it can stay in business for the long term.

James Parker – CEO of Southwest Airlines – *Do the Right Thing*

It's All About People

W. L. Gore & Associates

GORE-TEX and a thousand other products

Privately held $2B company that has made a profit every year for 50 years.

A lattice, not a hierarchy.

Associates have mentors, but not 'bosses'.

Leaders are people who attract followers.

Associates choose what to work on and make personal commitments to peers.

Evaluation is by peers based on overall contribution to the company.

Organized to foster innovation through teamwork, involvement, and passion.

Businesses include R&D, manufacturing, and sales and spilt when they reach 300 people.

Businesses are clustered within 25 miles of each other to provide cross fertilization.

Why hasn't this model been copied?

Semler Industries Inc.

Quotes by Ricardo Semlar
(author of Maverick and Seven Day Weekend)

"Give people the freedom to do what they want, and over the long haul their successes will far outnumber their failures."

"People, I've found, will act in their best interests, and by extension in their organizations' best interests, if they're given complete freedom. It's only when you rein them in, when you tell them what to do and how to think, that they become inflexible, bureaucratic, and stagnant."

"The purpose of work is not to make money. The purpose of work is to make the workers feel good about life."

Actually, it has…

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The Cure for Cost Center Disease

1. **Whole System Thinking**

2. **"Go and See" Approach**

3. **Purpose**
   Passion
   Participation
   Pride

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Think Whole System
Not Just Software

Software is rather useless

    – all by itself

All software is embedded

    In hardware

    In a process

    In an activity

software inside

*The product/process should be designed and developed as a **complete system** – by a **complete team**.*

The System

✓ Is usually developed at the same time as its software

✓ Evolves as the development process generates learning

✓ Generates changing demands for the embedded software

✓ In this context:

    What are Requirements?

    Product design decisions that the software team doesn't participate in.

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Think Products, not Projects

Projects

- ✓ Up-front funding
- ✓ Scope fixed at onset
- ✓ Success = cost/schedule/scope
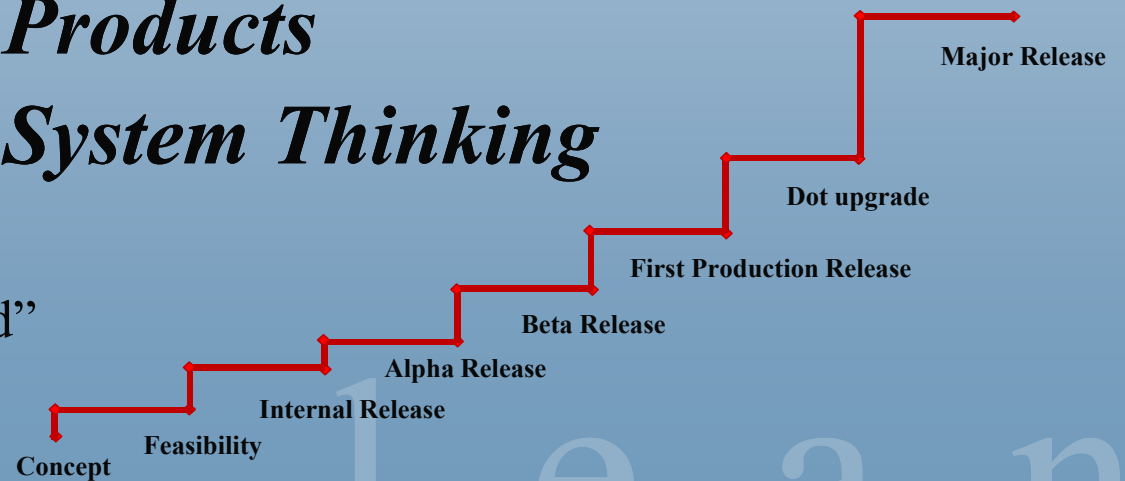- ✓ Projects have an "end"
  – Successful Software does not

Start of Project

Completion

Maintenance

Batch Funding →
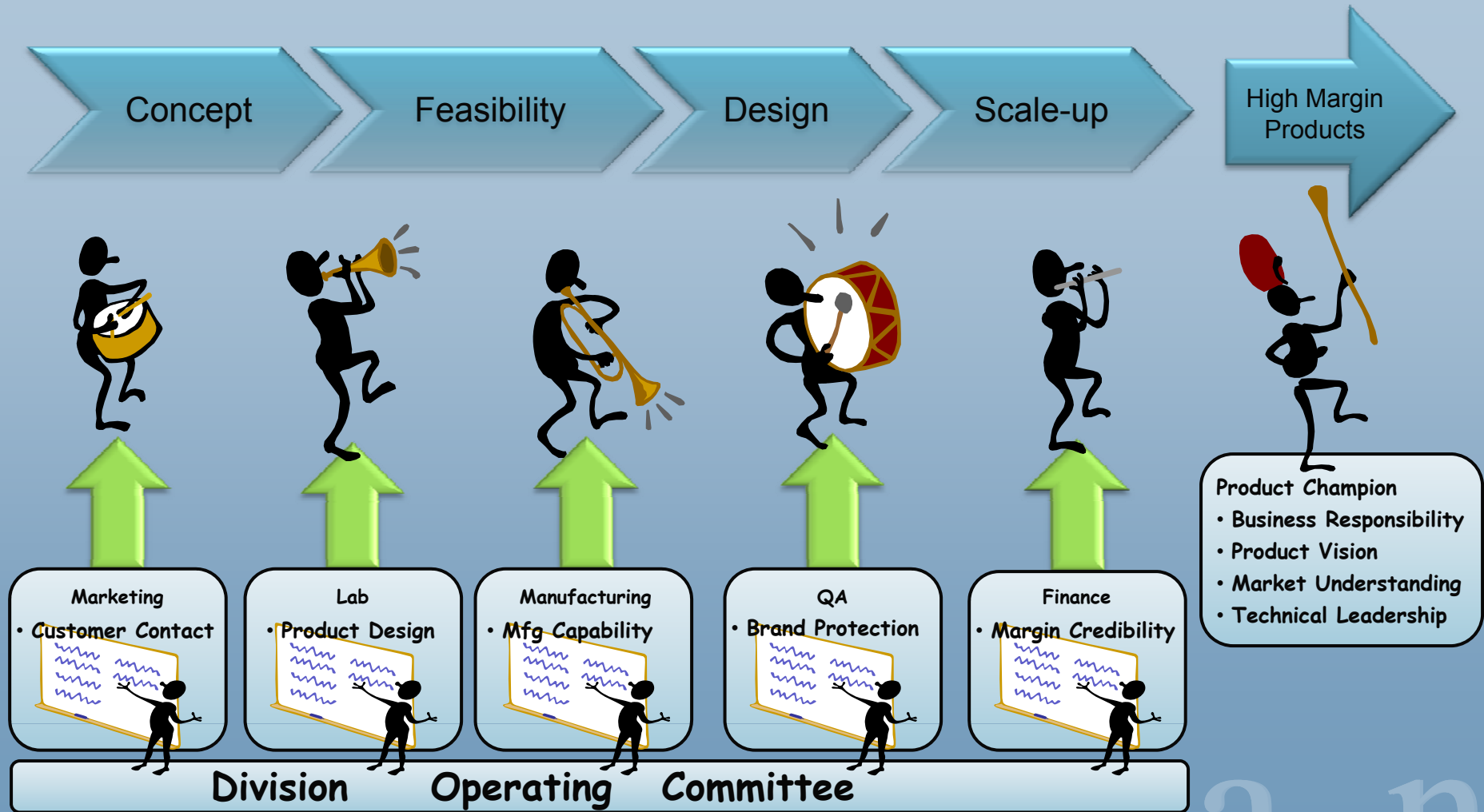## *Batch Thinking*

Products
System Thinking

- ✓ Incremental funding
- ✓ Scope is expected to evolve
- ✓ Success = profit/market share
- ✓ Successful products don't "end"
- ✓ The team usually stays with their product over time

Concept

Feasibility

Internal Release

Alpha Release

Beta Release

First Production Release

Dot upgrade

Major Release

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3M *Product Development*

Concept	Feasibility	Design	Scale-up	High Margin Products

Product Champion
- **Business Responsibility**
- **Product Vision**
- **Market Understanding**
- **Technical Leadership**

Marketing	Lab	Manufacturing	QA	Finance
• Customer Contact	• Product Design	• Mfg Capability	• Brand Protection	• Margin Credibility

Division   Operating   Committee

"Go and See" Approach

Ethnography

Ideation

## *Find out from first hand experience what the real customers problem is.*

- ✓ Developers should talk directly with customers, ask questions, model and discuss ideas – both before and while they are developing a product.
- ✓ Intermediaries are not adequate!

Example: Intuit's Follow-me-Home

- ✓ Whole team follows first time customers home
- ✓ Ask questions, empathize with problems
- ✓ *"It was an experience I'll never forget."*
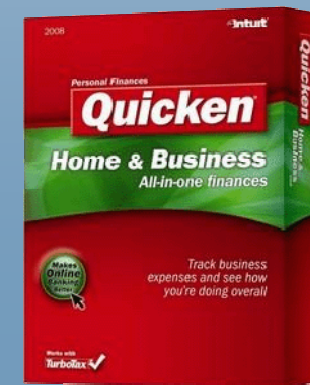
Purpose – Passion

The Gold Standard: Tandberg – Oslo, Norway

Everyone who works there told us the same thing:

*"Everything we do here is to make it
easy for people to communicate."*

"This is a great company. We think of programmers and salespeople as being the most important and respected positions, the "others", like the VP you met, all think of themselves – and express loudly – that they are in a supporting role." Olve Maudal, C++ Programmer

Participation – Pride

TANDBERG Codec C90

20 months from Idea to Production

Started spring 2007

1st HW prototype mid 2008

Released late 2008

55-65 people involved
   2-3 people mechanics/design
   4-5 people electronics/hardware
   40-50 people software dev
   5-6 people fpga development
   4 people test developers
   1 person approvals

Product Development in Tandberg

✓ We spend very little energy on things that are not essential
✓ We do not follow a plan, we do not follow procedures
✓ We do not write hours, we do not measure project cost
✓ Decisions are delayed as much as possible
✓ To fail is OK, therefore we deliver spectacular stuff
✓ Doers are very much respected in Tandberg
✓ We hire and keep exceptional people
✓ Communication is a key skill for all our engineers
✓ We are fast and "sloppy"
✓ We release early and we release often
✓ Little documentation gives effective communication
✓ Slack is embedded, and "skunk work" projects appreciated
✓ The company builds on trust
✓ Developers are treated as professionals, not as resources
✓ Fun and Profit

We follow principles, not processes!

Olve Maudal http://www.pvv.org/~oma/SoftwareDevelopmentAtTandberg_March2009.pdf

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What do these companies have in common?

Svenska Handelsbanken

SOUTHWEST

GORE
Creative Technologies Worldwide

ZARA

Semler Industries Inc.
Skills in Handling Solutions

They are very large companies.

They are consistently profitable.

*They **dominate** their industry.*
- ✓ *And have for a long time.*

Their front-line people are:
- ✓ Highly valued
- ✓ Expected to make local decisions
- ✓ Effectively engaged in delivering superior customer outcomes.

They have two key advantages:
- ✓ Workers routinely dedicate their intelligence and creativity to help their company be successful.
- ✓ The companies are adaptive
  - ✗ They detect and quickly respond to changing market conditions and opportunities.

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Thank You!

More Information: www.poppendieck.com