

**Opendesk**



# Software Engineering and the Small Business

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# Who Are We?



- Patrick Bradley
  - Architect and Senior Programmer
  - B.Sc. CS McGill 1996
- Kevin Trigg
  - Director of Software Development
  - B.Sc. CS McGill 1989

# Introduction

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- Theory
- Real-world
- Expectations

# In Scope

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- Environment
- Definitions
- Conflict
  - Company
  - Engineer
- Role of the engineer
- Process
- Summary

# Out of Scope

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- Medium and large businesses
- Specific technologies
- Specific methods



- Changing market
  - Trying to stay ahead
- Changing technology
  - Constantly learning
- Changing product direction
  - Flexible process

# Environment (cont)

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- Employees
- Mentality
- Growing company
- Existing processes



- Lack of funds
  - Lack of tools
- Lack of resources
  - Many jobs
- Lack of time
  - Development rushed



# Definitions

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- Process maturity  
=  $f(\text{knowledge} + \text{experience} + \text{seriousness})$
- Growth  
=  $f(\text{cash})$
- Efficiency  
=  $f(\text{maturity} / \text{growth})$

# Conflict

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- Company
  1. Maximize growth
  2. Maximize efficiency
  
- Engineer
  1. Maximize efficiency
  2. Maximize growth

# Roles of the Engineer



« Sheriff in a frontier town »

- Student
- Educator
- Salesman
- Implementer
- Enforcer

# Process

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- Must fit organization
  - Quick to implement
  - Rapid to execute
  - Minimal documentation
- Cooperative
- Compromise
- Must be open to change
  - But minimize impact

# Summary

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- Frustrating
- Difficult
- Constant battle
- Compromise
- Rewarding



# Recommended Reading



- « Code Complete », Steve McConnell
- « Rapid Development », Steve McConnell
- [www.extremeprogramming.org](http://www.extremeprogramming.org)
- « Extreme Programming Explained », Kent Beck