

The background of the lower half of the slide features a close-up, slightly blurred image of several interlocking gears. The gears are rendered in shades of blue and black, creating a mechanical and industrial aesthetic.

Productivity Killers

2007 ISMA Conference

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Productivity Killers

Agenda

- » Speaker's Experience
- » Productivity Definition
- » Productivity Killers
 - Developer Inability
 - Technological Barriers
 - Project Scope
 - Human Nature
 - Project Accounting
- » Conclusion
- » Open Discussion



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Speaker's Experience



Role	1978 - 2007
Software Developer	
Telephony Long Range Planner	
Software Project Manager	
Software Process Quality Assurance	
Software Metrics SME	
Contractual Metrics	

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Productivity Definition



» In General

- Productivity = Output ÷ Input

» For Software

- Productivity = Function Points ÷ Effort Hours
- Best to limit effort to that which affects functionality

» Not Recommended for Maintenance

- Maintenance does not produce functionality; it baby-sits it
- Instead, evaluate maintenance value based on cost for services performed

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Developer Inability



» Lacking Business Knowledge

- HR Failures: Did not retain stable workforce
- Strategic Failures: Workforce replacement without effective Knowledge Transfer

» Lacking Technical Mastery

- HR Failures: Did not hire and train qualified developers
- Inappropriate Tools
- Lack of Experience and/or Training with Tools

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Technological Barriers



- » Inappropriate Mix of Tools
- » Inadequate Data Communications
- » Inefficient Test Environments
- » Inappropriate Platform
- » Inappropriate Language

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Project Scope



- » Excessive Requirements Churn
 - Too much change: 1-10-100 Principle of Quality
 - Change that is too late
- » Inappropriate Testing Requirements
 - Regression and Integrated System Testing not always needed
- » Project Size
 - Too Small: Sunk costs overshadow functionality delivery
 - Too Large: Too many communication paths and too much change during the project

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Human Nature



- » Estimate Padding
 - Helps budget, but hurts productivity
 - Common when there are severe penalties for budget overrun
- » Budget Exhaustion
 - If you are finished, then STOP, even if there is budget left
- » Excessive Status Reporting
 - Too many resources spending too much time
 - Usually driven by end users
- » Excessive Executive Attention

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Project Accounting



- » Only Affects Perception
- » Too Few Function Points
 - Overlooked Functionality
 - Application Boundaries Too Large
- » Too Much Effort Included
 - Opportunity Analysis
 - Functional SME
 - Effort from wrong project (dumping ground)
 - Detailed, timely and accurate time reporting is the cure

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Conclusion



- » Developer Inability
 - Business Knowledge; Technical Mastery
- » Project Scope
 - Churn; Testing; Size
- » Human Nature
 - Estimate Padding; Spend Budget; Status Reporting; Executive Attention
- » Technological Barriers
 - Tools; Data Communications; Test Environment; Platform; Language
- » Project Accounting
 - Too Few Function Points; Too Much Effort