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## Process Discipline in the Information Age

Rethink the Quality Abstraction

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## Today's Discussion

- # Introductions
  - Introduction
  - Preface
  - Where Are We Headed?
- # Lightweight, Process, Development
  - What's "Lightweight"?
  - Is it the Developers...?
  - What's Process Discipline?
  - ...About Development Processes
  - Smart Development vs. QA
- # Issue
  - Where's the Discipline?
  - Common Misconceptions:
    - About Lightweight
    - About QA
  - How Can QA Be Independent...?
- # Transition
  - Discipline in Lightweight?
  - Undisciplined = Planning & Feedback Don't Happen?
  - Does This Look Undisciplined?
  - XP's Rules and Practices
  - Process Discipline in Lightweight
- # Resolution
  - Game plan: Put QA Where It Wants to Be
  - What We've Covered
  - New Perspective?
  - Resources

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## Introductions

Self/Company Introduction  
Topic Preface  
Where Are We Headed?

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## Brief Introduction to Entinex

- # Business and Technical Processes for the Information Age.
- # No shelfware: It takes a no-bones attitude to make extraordinary things happen.
- # Make your company's success, "business as usual."
- # Use technology process management to match internal activities with business needs and customer expectations.
- # Improve product development and delivery, ensure service quality, and increase project success rates.


**Entinex Makes IT Work™**

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## Who Is This Guy?

- # Introduction
- # Fresh Fish in the Fire
- # Jedi training
- # The Dark Side
- # Why Talk?
- # Staying/Staying on Topic
- # "...Slings and Arrows..."
- # Tom Peters!



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## Preface

- # Software:
  - It's "Everywhere"
  - It's in "Everything"
- # Software Then:
  - Few Could Do It
  - Fewer Understood It
- # Software Now:
  - Teens Can Do It
  - Yesterday
  - Still Poorly Understood




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## Preface 2

- # Process Then:
  - What Processes?
- # Process Now:
  - ISO
  - CMM
  - MBNQA
  - What Processes?
- # Process Tomorrow:
  - Must Match Business Case
  - Can't Slow Speed of Development
  - Must Be Integration Between Progress and Discipline




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## Preface (last)

- # Life Cycle of Software Development Life Cycles:
  - None
  - Strict/Scientific
  - Tailored
  - Reasonable
  - Adaptive
  - Agile/Lightweight
  - Business Modeled
- # Development Is In Constant Acceleration:
  - Market Forces
  - Technology Capabilities
  - Makes SDLCs Obsolete




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## Where Are We Headed?

- # Process Discipline Can't Be Static
- # Quality Relies On Process Discipline
- # Therefore: Quality Assurance Can't Be Static



- # Quality Assurance Can't Be Ignored
- # Productivity Often At Odds with QA
- # Therefore: Productivity Can't Be Ignored by QA Systems

- # How Do We Achieve Process Discipline AND Productivity Needs?

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## Lightweight, Process, Development


What Do We Mean By "Lightweight" ?  
Is it the Developers or the Processes?  
What's the Goal of "Process Discipline?"  
A Word About Development Processes  
Smart Development vs. QA

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## What Do We Mean by Lightweight?

- # Lightweight Thinking
  - What do you know about "lightweight?"
  - The Source of Lightweight's "rap"
  - No Processes?
- # Lightweight Being
  - Lightweight, a working definition:
    - "...the minimum, most unobtrusive approach to developing software that produces a quality product when the customer expects to get it, at the price they expect to pay..."



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## What We Mean by Lightweight (Cont'd)

- # Alistair Cockburn ('co-burn'):  
 "Computers must support the way in which people naturally and comfortably work. This is needed both for personal job satisfaction and for corporate survival. I care about whether the team is thriving, and whether the software is coming out the door. Keeping the people trained and the process light are key to both."
- # Another Alistair Attribution:  
 "[Software development] methodologies that focus on the use of as little process as possible to obtain good results. Often proportioned to the size or risk of the project."

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## What We Mean by Lightweight (Cont'd)

- # Martin Fowler's "The New Methodology"
  - From Nothing, to Monumental, to Agile
    - Predictive versus Adaptive
    - Separation of Design and Construction
    - The Unpredictability of Requirements
    - Is Predictability Impossible?
    - Controlling an Unpredictable Process
    - The Adaptive Customer
  - Putting People First
    - Plug Compatible Programming Units
    - Programmers are Responsible Professionals
    - Managing a People Oriented Process
    - The Role of Business Leadership

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## What We Mean By Lightweight (Cont'd)

- # Emerging Themes
  - A business theme
  - A progress theme
  - A people theme, and yes,
  - A process theme
- # Lightweight Principles
  - The Agile Alliance



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## What We Mean By Lightweight (Cont'd)

- # This is Lightweight?
- # Or is THIS Lightweight?

"We value:  
Individuals and interactions over processes and tools  
Working software over comprehensive documentation  
Customer collaboration over contract negotiation  
Responding to change over following a plan

That is, while there is value in the items on the right, we value the items on the left more."

We follow these principles:

- Our highest priority is to satisfy the customer through early and continuous delivery of valuable software.
- Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage.
- Deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale.
- Business people and developers must work together daily throughout the project.
- Build projects around motivated individuals. Give them the environment and support they need, and trust them to get the job done.
- The most efficient and effective method of conveying information to and within a development team is face-to-face conversation.
- Working software is the primary measure of progress.
- Agile processes promote sustainable development. The sponsors, developers, and users should be able to maintain a constant pace indefinitely.
- Continuous attention to technical excellence and good design enhances agility.
- Simplicity – the art of maximizing the amount of work not done is essential.
- The best architectures, requirements, and designs emerge from self-organizing teams.
- At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behavior accordingly.

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## What We Mean By Lightweight (Cont'd)

- # One Last Definition (a programmer's view)
 


"...lightweight methodologies de-emphasize production and emphasize productivity. Production here is defined simply as *producing things*, whereas productivity is defined here as *the rate at which requirements are being satisfied*. Any production that is not productively contributing to requirements satisfaction is bureaucracy."
- # Robust?
- # Real Value, True Colors

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## Is it the Developers or the Processes?

- # How's the Horse Lookin'?
  - Made the Case for Process Discipline.
  - Made the Case for Development Productivity.
  - Introduced Agile Methods.
- # Do Agile Methods Ignore Process Discipline?
  - Yes? Really!
  - No? Be from Missouri.




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## What's the Goal of "Process Discipline?"

- # A working definition of Process Discipline
- # Process Discipline in a Nutshell
  1. The right things
  2. The right way and
  3. Can prove that we've done it, and
  4. We can fix things wherever we fail in any aspect of the above three

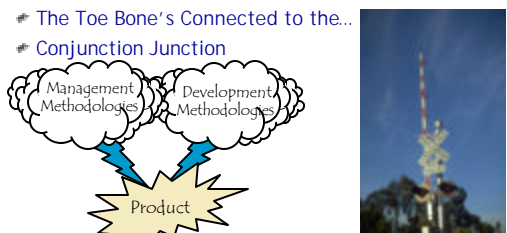


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## A Word About Development Processes

- Would You Like Fries with That?
- Do As I Say, AND As I Do
- The Toe Bone's Connected to the...
- Conjunction Junction




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## Smart Development vs. QA

- (Good) Development Life Cycle Performing QA
- Can a Life Cycle Substitute for QA?
- How Can QA "Get Done" w/out Staples of Legacy Life Cycles?



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## Issue


Where's the Discipline?  
Common Misconceptions About Lightweight  
Common Misconceptions About QA  
How Can QA Be Independent Yet Dependent?

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## Where's the Discipline?

- Where Does Discipline "Show Up" in the Development Process?
- Ensuring Standards are Met
- Ensuring People Know What to Do
- Ensuring Everything Holds Together
- "On One Foot."
- K.I.S.S.



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## Common Misconceptions About Lightweight Development Processes

- I'm a Swan! Says the Ugly Duckling
- Keeping Up the the Times
- It's In There...

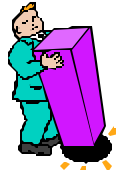


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## Common Misconceptions About QA

- QA is Tied to ONE way of doing things.
- All Things being NOT equal, QA Stays the Same.
- QA Can be "Bolted Onto" Existing Processes WITHOUT Matching to the Development Process.



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## How Can QA Be Independent Yet Dependent?

- QA Independence i.e. NOT "only good for" a single style of development.
- QA Dependence i.e. NOT a static process.
- QA Adapts to Business and Development Environments

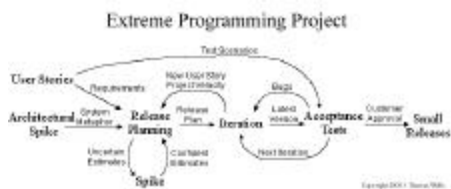


## Transition

- Discipline in Lightweight?
- Undisciplined = Planning & Feedback Don't Happen?
- Does This Look Undisciplined?
- XP's Rules and Practices
- Process Discipline in Lightweight

## Discipline in Lightweight?

- An XP Overview



## Undisciplined = Planning & Feedback Don't Happen?



## Does This Look Undisciplined?



## XP's Rules and Practices

- **Planning**
  - User stories are written.
  - Release planning creates the schedule.
  - Make frequent small releases.
  - The Project Velocity is measured.
  - The project is divided into iterations.
  - Iteration planning starts each iteration.
  - Move people around.
  - A stand-up meeting starts each day.
  - Fix XP when it breaks.
- **Coding**
  - The customer is always available.
  - Code must be written to agreed standards.
  - Code the unit test first.
  - All code is pair programmed.
  - Only one pair integrates code at a time.
  - Integrate often.
  - Use collective code ownership.
  - Leave optimization till last.
  - No overtime.
- **Designing**
  - Simplicity.
  - Choose a system metaphor.
  - Use CRC cards for design sessions.
  - Create spike solutions to reduce risk.
  - No functionality is added early.
  - Refactor whenever and wherever possible.
- **Testing**
  - All code must have unit tests.
  - All code must pass all unit tests before it can be released.
  - When a bug is found tests are created.
  - Acceptance tests are run often and the score is published.

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## Process Discipline in Lightweight

- # Applying the Earlier Re-definition of Process Discipline, Process Discipline on Lightweight Development is a Matter of:
  - Ensuring that the method's Rules and Practices are taught to new developers on the project,
  - Ensuring that the method's Rules and Practices are followed by everyone,
  - Escalating to decision makers when the method's Rules and Practices are not followed and not resolved within the project,
  - Measuring the effectiveness of the method's Rules and Practices,
  - Providing visibility to management via appropriate metrics from prior project experience,
  - Knowing when the method's Rules and Practices need to be adjusted, and
  - Having an independent person doing the above.

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## Resolution

Game plan: Put QA Where It Wants to Be

What We've Covered





Conclusion

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## Game plan: Put QA Where It Wants to Be

- # Characterize Today's Process Discipline Programs
- # What's the Point? (Or, Tell me about your mother)
- # Zig Right, Zag Left, Stop, Turn Around, and Wait
- # Out on a Limb, the View is... Different
- # Process Pull (Shake)
- # Process Twist (Rattle)
- # Process Push (Roll)

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## What We've Covered

- # Current QA Practices Have Evolved from a Legacy of Adaptations of Previous QA Approaches
- # Many of the Previous QA Approaches Did Not Achieve Anticipated QA Results
- # Most of the Previous QA Approaches Were Not Designed to Add Business Value So Instead they Got in the Way
- # Such Approaches Fostered Resentment Towards QA and Process Discipline
- # Lightweight Methods Grew Out of the Need to Find Non-Oppressive Processes

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## What We've Covered (Cont'd)


- # Misconceptions Between Lightweight Methods and Processes Discipline Have Kept the Two Apart
- # By Integrating Processes Into Development, QA Can Be Matched to the Speed of Development
- # Integrating QA into Development Will Require Re-Orientation of the QA Abstraction, But
- # May Also Require Different Talent Mix for Certain Roles
- # Integrating QA Process Into Development Processes Will Lead to Greater Business Value, And
- # Greater Process Compliance

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## Conclusion: New Perspective?

- # Do you have a new perspective?
- # Are there things that you see you can do to separate management and development methodologies?



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## Resources

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Beck, Kent. *Extreme Programming Explained: Embrace Change*, Addison-Wesley, 2001.

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## Q & A



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