



BRIEFING PAPER

www.radtac.co.uk

EXTREME PROGRAMMING (XP)

Extreme Programming (XP) is a lightweight, Agile approach for small-to-medium-sized development teams, so named because it takes programming best practice to the 'extreme'. *Extreme Programming Explained* by Kent Beck was published in 1999, and had a major impact on the software development industry - with XP quickly establishing itself globally as the most widely used Agile method. A second edition of Kent's book was published in 2004, which re-articulated the approach and added some new elements. Many users of XP continue to use the approach as originally described, and the concepts and terminology from the second edition are growing in popularity.

Full XP consists of both 'primary' and more advanced, 'corollary', practices. These are underpinned by XP's principles and its 5 basic values: Communication, Simplicity, Feedback, Courage, Respect.

XP Primary Practices

» Team

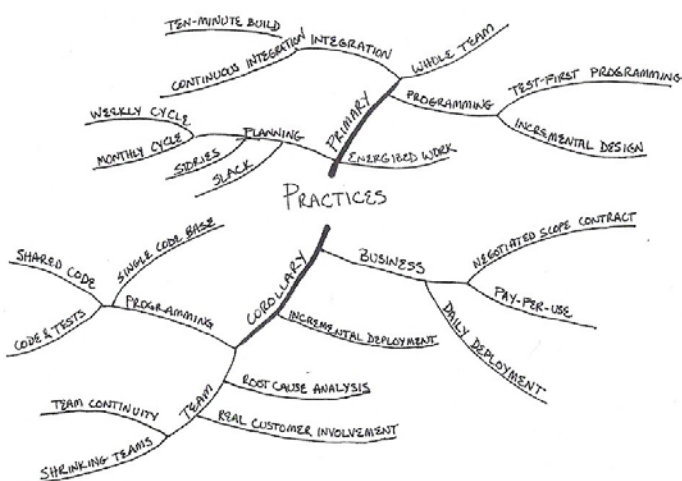
- The team should be a *Whole Team* comprising all the business and technical members, skills and perspectives needed
- The team should all *Sit Together* ...
- ... in an *Informative Workspace* with posted charts showing progress etc.
- Guard against burn-out to ensure *Energised Work* at a sustainable pace

» Planning

- Business requirements and project plans are defined in terms of short user *Stories* describing visible functionality and value
- Plan should include some *Slack* tasks that can be dropped if things overrun
- Stories are developed and delivered in *Weekly and Quarterly Cycles*

» Development

- *Incremental Design* during coding, 'refactoring' a simple solution to meet changing needs rather than trying to predict everything by big up-front *Test-First Programming*: Tests for the code are written before the code itself
- Code may be written and reviewed by two people '*Pair Programming*' at one machine: one 'coder' and one 'navigator'
- Build problems are be minimised by *Continuous Integration* of changes, many times every day
- Integration and testing are quick: the target is a *Ten-Minute Build*..





BRIEFING PAPER

www.radtac.co.uk

EXTREME PROGRAMMING (XP)

XP Corollary Practices

» Team

- Where possible, maintain *Team Continuity* over several projects
- As they become more productive, plan to have *Shrinking Teams* that free-up members to seed and form new teams
- Have *Real Customer Involvement* in the team, rather than customer proxies

» Planning

- Establish a *Negotiated Scope Contract* whereby time, cost and quality are fixed and the scope to be delivered is negotiated during development
- Meet the cost of software development on a *Pay-Per-Use* rather than a pay-per-release basis

» Development

- Use *Root Cause Analysis* to eliminate defects and their causes as they arise
- Only *Code and Tests* are required as permanent artefacts – everything else of value can be generated from these
- Collective team ownership of *Shared Code* means that any team member can change anything
- Maintain one, official *Single Code Base*
- Avoid big-bang implementations through *Incremental Deployment*
- Reduce implementation risk through *Daily Deployment* of new software into production

XP Principles

- Have regard for the team's **Humanity**
- **Economics**: Optimise business value
- Make all activity of **Mutual Benefit** to all
- **Self-similarity** of multi-level approaches
- Strive for **Continuous Improvement**
- Seek **Diversity** of perspectives and skills
- **Reflection** on the 'how and why' of work
- Ensure a **Continuous Flow** of value
- A problem is an **Opportunity** for change
- Use **Redundancy** of different solutions
- To succeed you must risk **Failure**
- Maximise **Quality**, but not perfection
- Small **Baby Steps** not big-bang changes
- Get Accepted Responsibility for work

Further information

RADTAC

St Martin's House

16 St Martin's le Grand, London EC1A 4EN

Tel: +44 (0) 207 397 8340

Email: enquiries@radtac.co.uk

Website: www.radtac.co.uk

About RADTAC

RADTAC provides Consulting, Training and Delivery Services for Agile Methods, Project Management, Systems Development and Process Improvement.

We provide unique in-depth expertise across a full range of services; including Certified Training in Scrum, DSDM / Atern, XP, Lean, Agile Unified Process, PRINCE2 and ITIL.