

Two words:
improve workflow

HOW TO PRACTICE XT ?

HISTORY OF XT

- Was started by Kent Beck at Daimler Chrysler in 1996.
- A Response to non-agile methodologies of the 80's
- It was successfully practiced in Credit Swiss life, Daimler Chrysler & Ford motor company.
- And still not enough evidence to determine if XT is in the holy book of software engineering.

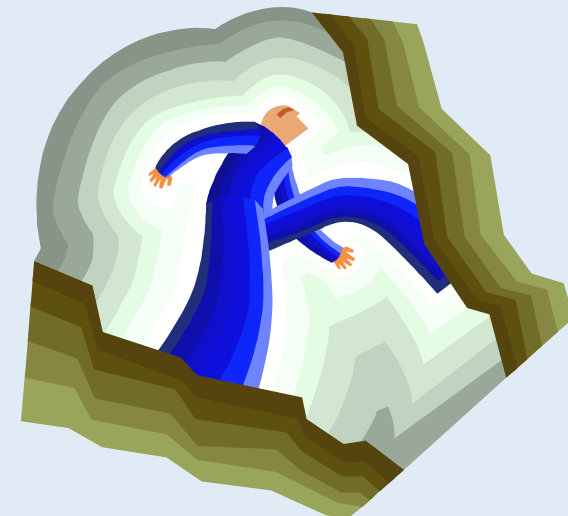


XT-OBJECTIVES

- Why XT ?
- How to start with XT ?
- XT-life cycle
- XT v/s TRADITIONAL
- When to go for XT?
- Estimating XT
- XT-Limitations
- Embracing change

CHALLENGE AHEAD!!

- If you knew that your customer could afford only one day of Testing , what would you do different.....
- ...especially by doing something different , he might be able to afford yet another day of Software Testing.





*“There are many mountains up to heaven
& many pathways up each mountain”
- An Old Chinese proverb*

WHY EXTREME TESTING(XT) ?

- Doing right things right first time.
- Testers are more exposed to Logical & Analytical skills.
- Test Exit at the earliest.
- Revolutionize the concept of testing.
- Working as a whole Team towards a common goal.



*“ Be not astonished at new ideas;
For it is well known to you that a thing does
not therefore cease to be true because it is not
accepted by many.”*



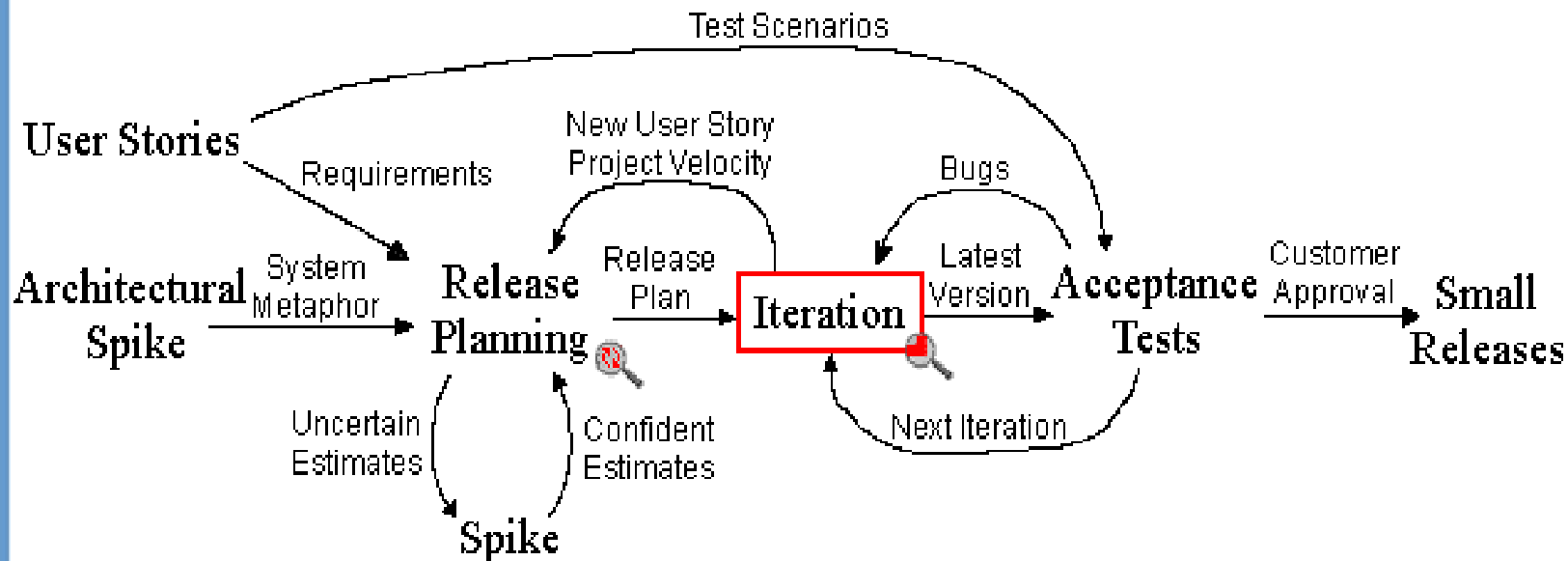
Baruch Spinoza (1632-1677)

HOW TO START WITH XT ?

- Form an XT team exclusively implementing XT methodology (size depends on the complexity of project)
- XT team should be responsible for coordinating the Unit testing, Acceptance testing, Nightly build Integration testing
- Each individual ensures that the XT practice is in place and facilitate for Zero defect Quality product.

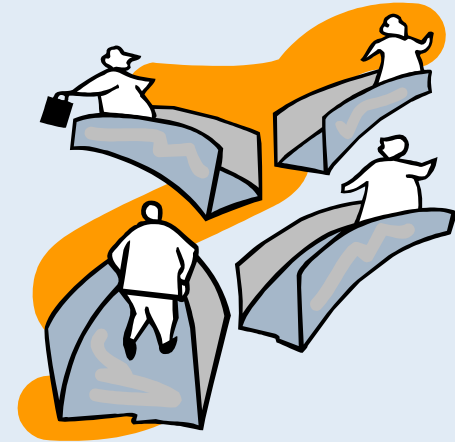


XT LIFE CYCLE



XT – METHODOLOGIES

- XT - Test design pair
- XT – Unit test pair
- XT - Continuous integration pair
- XT - Acceptance test pair



XT - TEST DESIGN PAIR

- Quality focus on simple test design
- Create automated unit test suites
(Automated unit tests offer a pay back far greater than the cost of creation.)
- Refactoring – To keep the Test cases synchronous with application code
- Validate the quality control tests



XT- UNIT TEST PAIR

- ❖ Idea Exchange
- ❖ Personal/Social factors
- ❖ Attention flow
- ❖ Test strategy
- ❖ Collective Test Ownership

XT- CONTINUOUS INTEGRATION PAIR

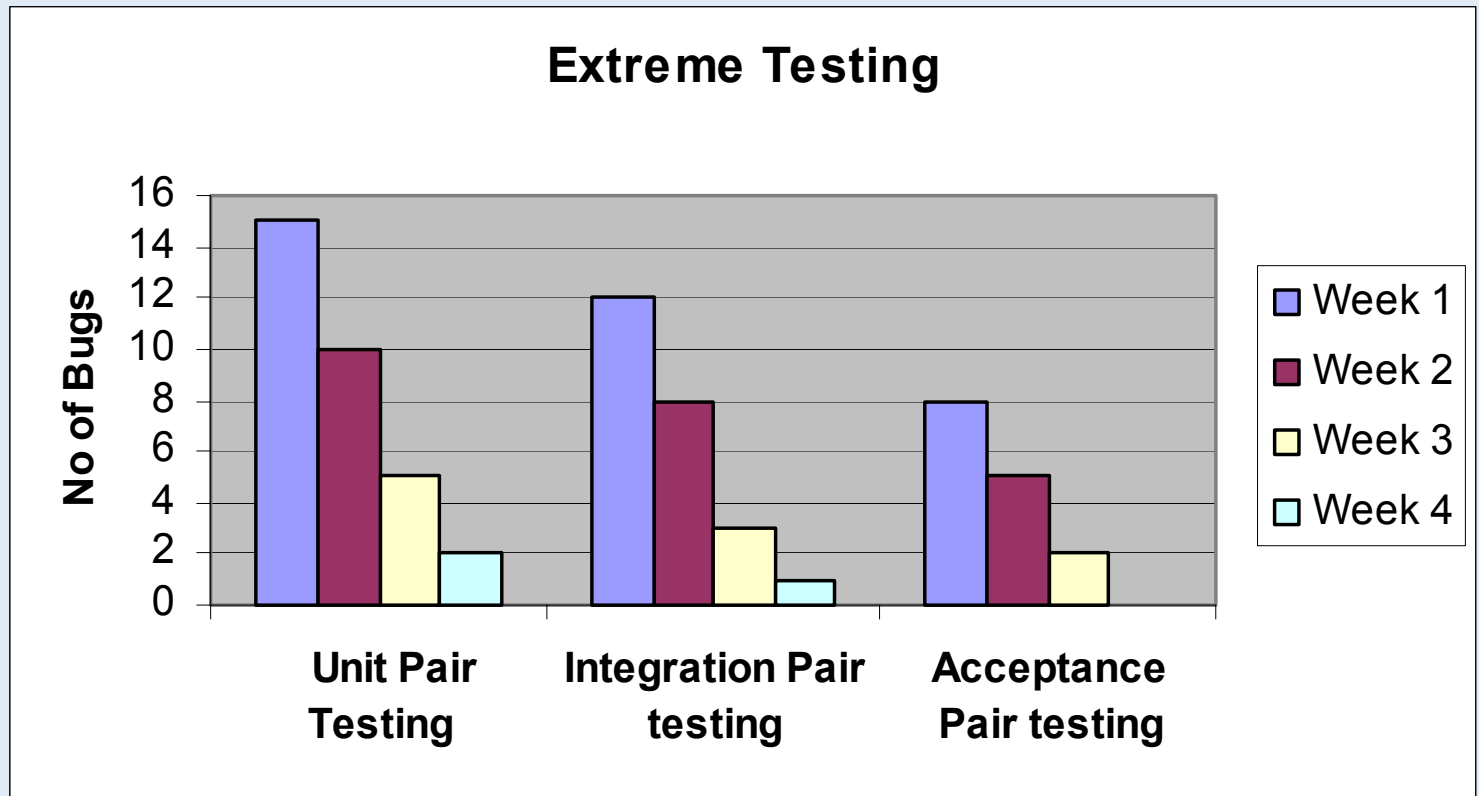
- Nightly/Routine builds testing.
- Initiate small Iterative Build releases.
- Integration Effort exponentially proportional to the time between integrations.
- Majority of bugs manifest themselves the same day they were introduced

XT-ACCEPTANCE TEST PAIR

- Customer-Tester Pair testing.
- Validating User stories.
- Regression tests prior to Production release.
- Better test coverage in Lesser time.

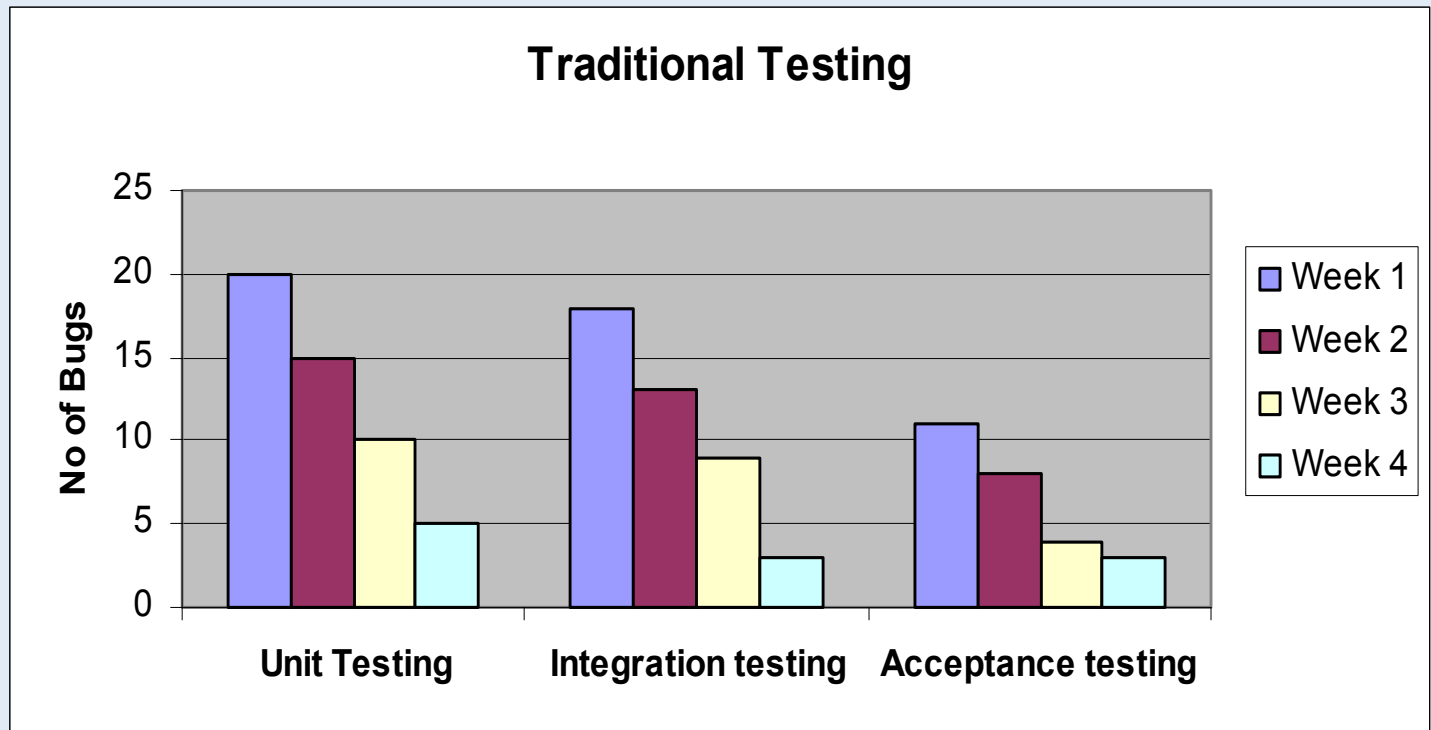


WHY XT PRODUCTIVE



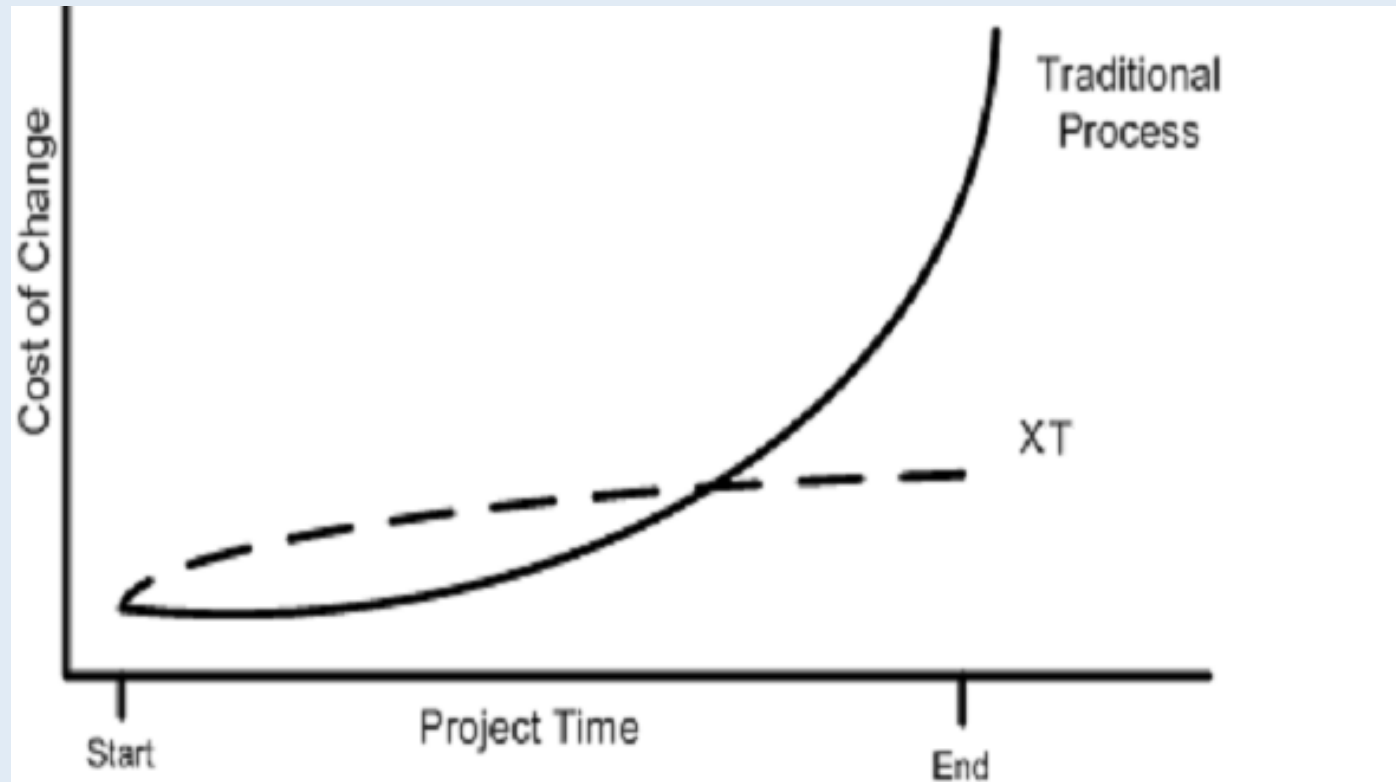
(California State University, Sacramento)

AND TRADITIONAL TESTING COSTS MORE

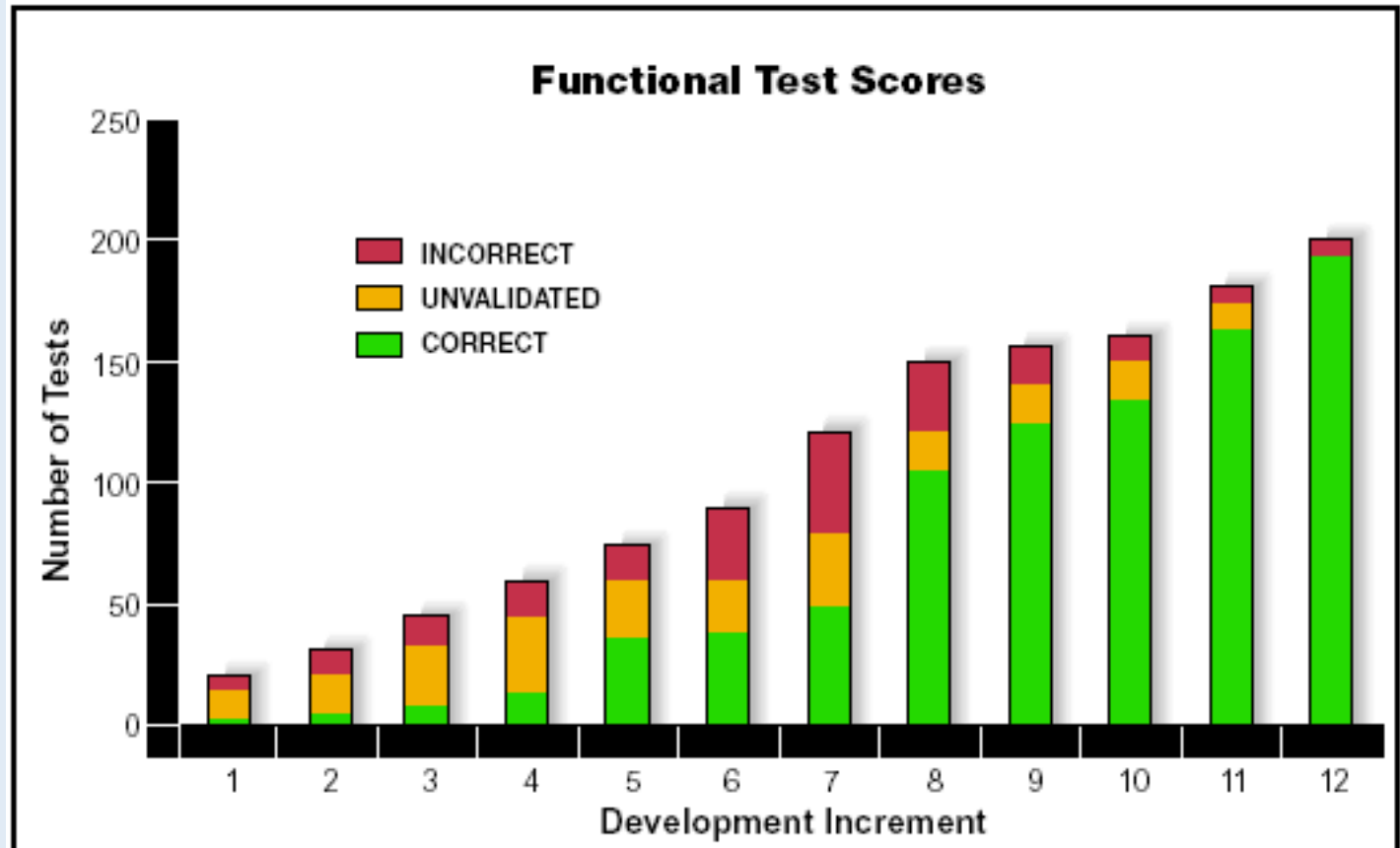


(California State University, Sacramento)

XT - COST VS. TIME



WHY XT PRODUCTIVE



(Software Testing & Quality Engineering Magazine, March-April 1999)

WHEN TO GO FOR XT ?

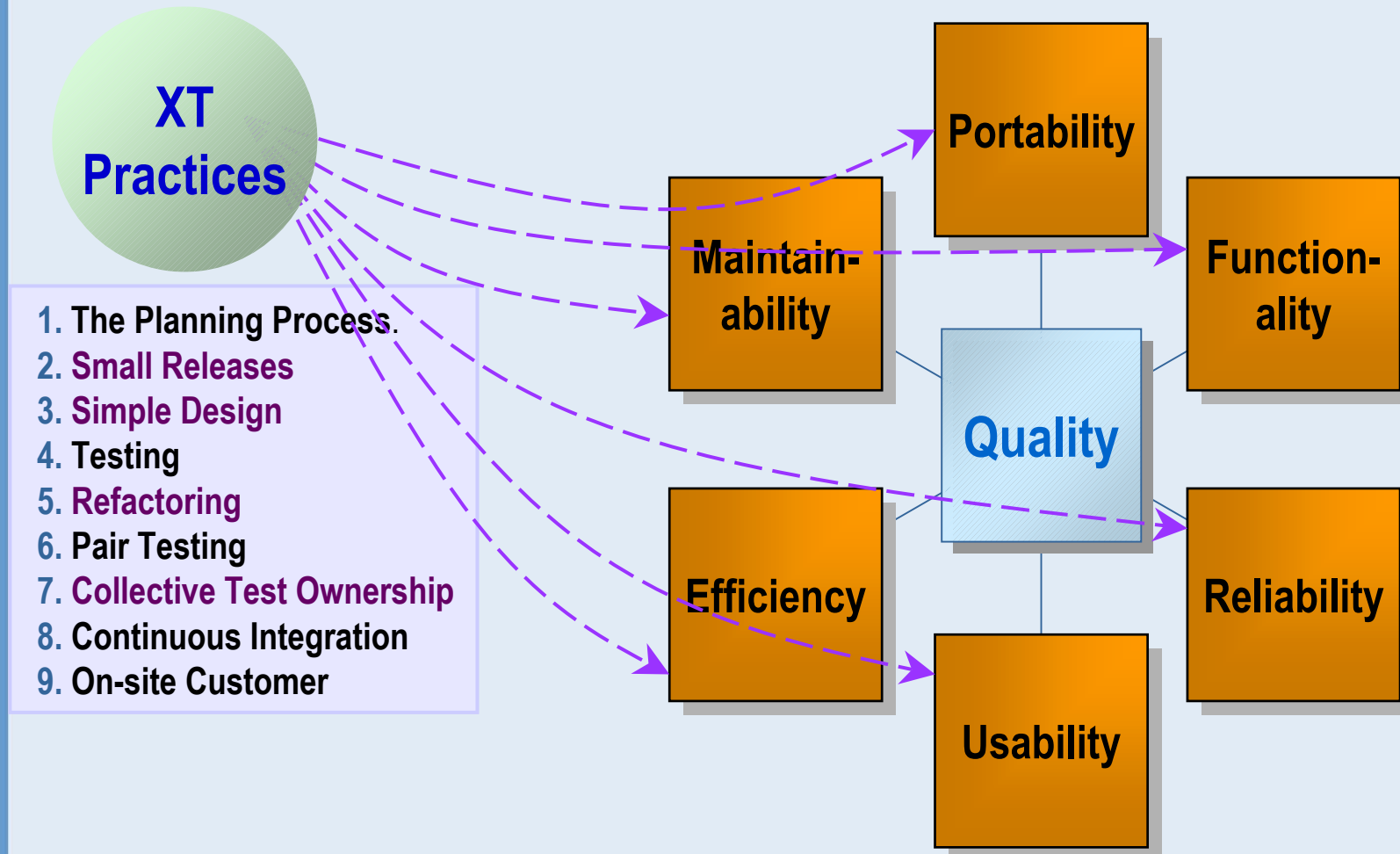
- **When the project is affected by these factors :**
 - **Too Complex project**
 - **Deadlines are short.**
 - **No time for Prototyping.**

- **Team building , greater Synergy & co-ordination.**

WHEREAS TRADITIONAL CROSSES

ID	Task Name	Start	Finish	Duration	Apr 2003				May 2003				Jun 2003				Jul 2003			
					6/4	13/4	20/4	27/4	4/5	11/5	18/5	25/5	1/6	8/6	15/6	22/6	29/6	6/7	13/7	
1	Getting Requirements	1/1/2003	2/25/2003	40d	[Gantt bar spanning from 1/1/2003 to 2/25/2003]															
2	Analyze Requirements	2/20/2003	3/26/2003	25d	[Gantt bar spanning from 2/20/2003 to 3/26/2003]															
3	Design	3/27/2003	4/16/2003	15d	[Gantt bar spanning from 3/27/2003 to 4/16/2003]															
4	Customer Design Review	4/17/2003	4/23/2003	5d	[Gantt bar spanning from 4/17/2003 to 4/23/2003]															
5	Implementation	4/24/2003	5/21/2003	20d	[Gantt bar spanning from 4/24/2003 to 5/21/2003]															
6	White Box Testing	5/22/2003	6/18/2003	20d	[Gantt bar spanning from 5/22/2003 to 6/18/2003]															
7	Black Box Testing	6/19/2003	7/16/2003	20d	[Gantt bar spanning from 6/19/2003 to 7/16/2003]															
8	Acceptance Testing	7/17/2003	7/31/2003	11d	[Gantt bar spanning from 7/17/2003 to 7/31/2003]															

XT AND QUALITY

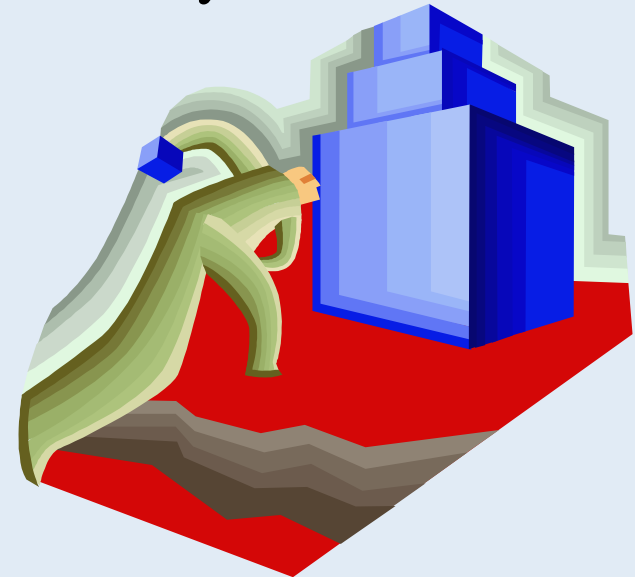


XT-LIMITATIONS

- XT will work only when both the development team and the business organization are realistic about what XT can deliver.
- Not recommended for small projects.
- Relies on too many personal factors & hence 'Risk Oriented'.
- At times bypasses the QA Process.

HOW TO OVERCOME THIS ?

- Create a set of guidelines for implementing XT.
- Define a Quality process for XT.
- Document essentials only when you really need them.



- **XT- not too simple but worth implementing!!!!**
- **Time to embrace change**
- **XT proves that testers are productive**



Questions/Thoughts



Thank You !

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COLLECTIVE TEST OWNERSHIP

- Module belongs to the project, not to an individual test engineer
- Exchange of modules
- Faster progress - There is no need to wait for someone else to test a particular module

Anyone can test

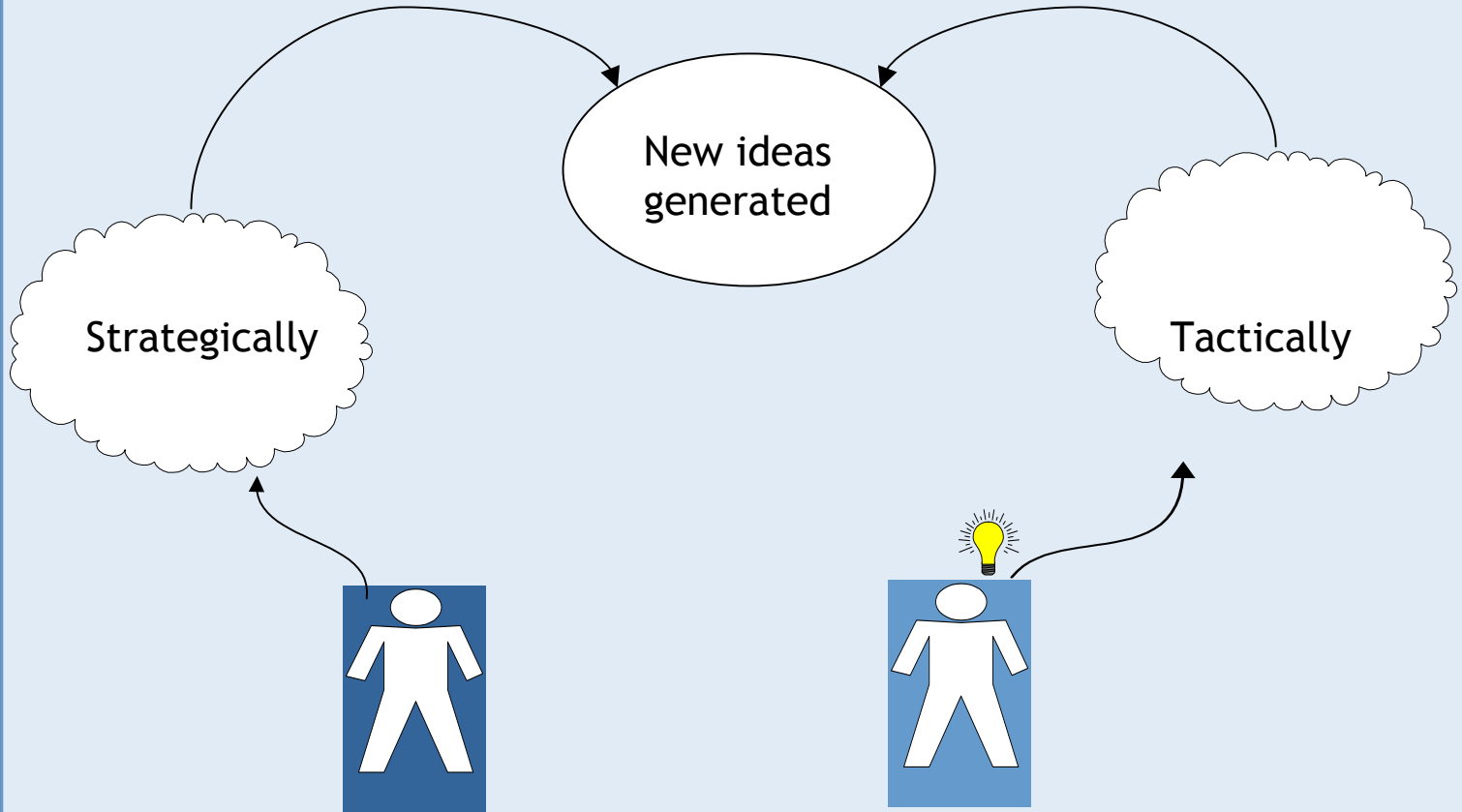
Any module at

Any time



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IDEA EXCHANGE



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PERSONAL/SOCIAL FACTORS



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TEST-DRIVEN DEVELOPMENT (TDD)

- Write tests before code
- Write every test that might not run
- Tests are automated
- Must run at 100% before proceeding

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FLOW OF ATTENTION

- The testers synchronize their pace of work (ex: use the same test machine at the same time)
- One tester “drives” at the keyboard, while the other tester comments.

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