Experience-based technique

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Apr, 2014

Duration: 3 hours

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1. Highlights

1. Experience-Based Testing and Exploratory Testing

Experience-Based Testing	Exploratory Testing
Is a fact.	Is an theory of approaching method for testing.
Is mental.	Is obvious with specific testing methods
Experience as the guideline	Plan and Process as the guideline
Different exploration methods and plans	Not a technique. All testing techniques could be applied.
Depend on tester's experience (understandings, skills, background, etc.)	Suitable for both experienced and non-experienced testers
Standard designing techniques: ✓ Error guessing (no rules, think of "impossible") ✓ Checklist-based ✓ Exploratory ✓ Applying the best technique	*…….See on next slide……*

1. Highlights

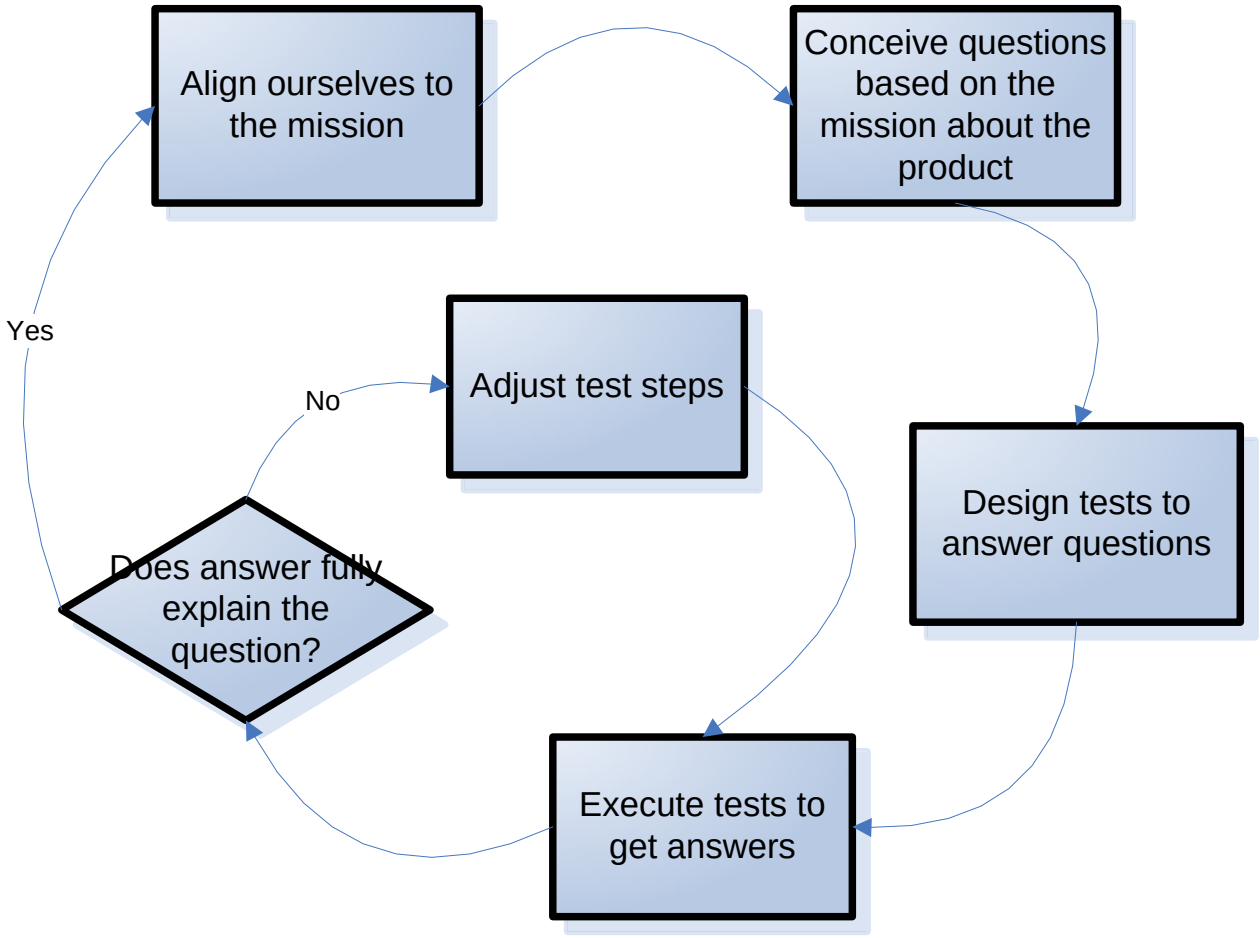
1. Experience-Based Testing and Exploratory Testing

- Some ways of exploring in practice
  - Freestyle exploratory testing
  - Functional testing of individual features
  - Exploring high level test cases
  - Exploratory regression testing (by verifying fixes or changes)
  - **Session-based exploratory testing**
  - **Exploring like a tourist**
  - Outsourced exploratory testing
    - Advanced users, strong domain knowledge
    - Beta testing

1. Highlights

1. Experience-Based Testing and Exploratory Testing

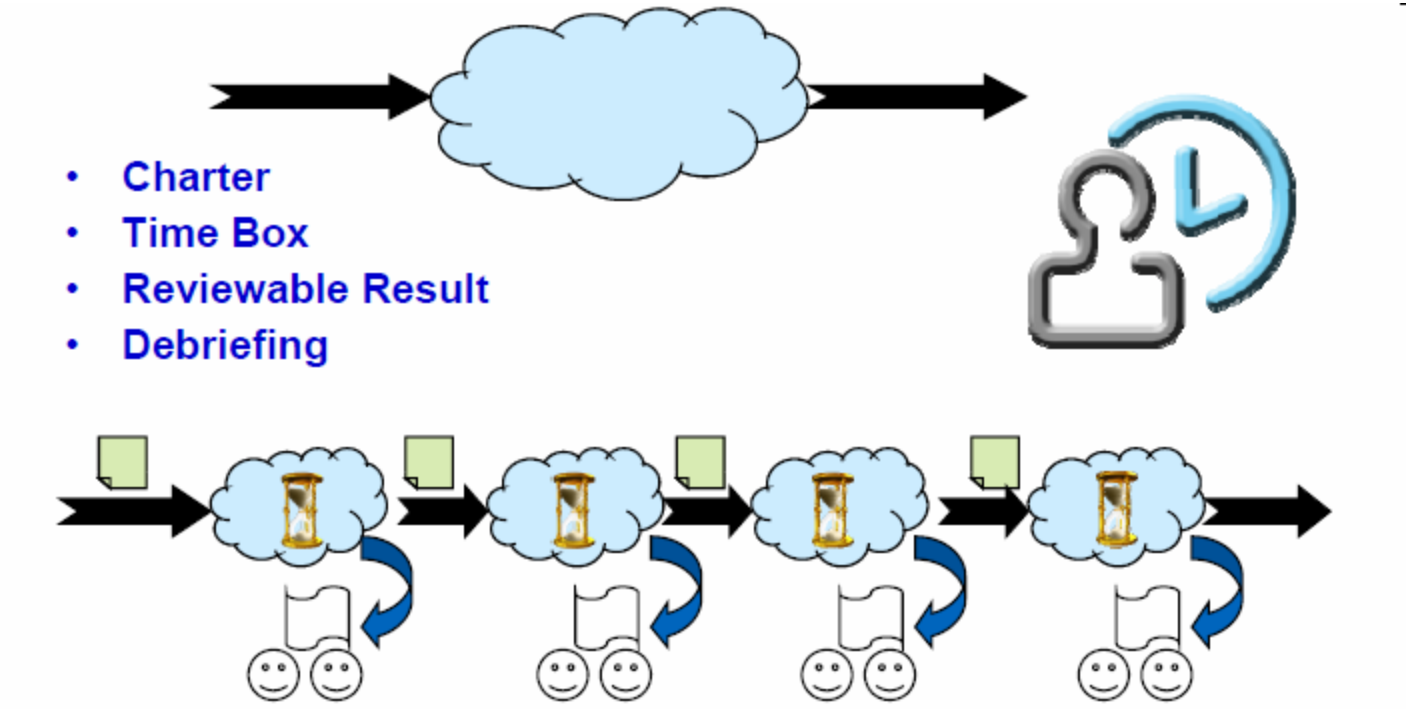
- Exploratory Testing process



1. Highlights

2. Ways of Exploring (Session Based Test Management, Touring testing)

1. SBTM (also called Chartered Exploratory Testing):
   - No writing test cases, just dividing work into small chunks
   - Track in time-boxes sessions.
   - Efficient (no document), fast, quick adapt, explicit (detailed session, manageable)
   - Suitable when resources are scarce, or not full-effort testers.



1. Highlights

2. Ways of Exploring (Session Based Test Management, Touring testing)

2. Touring testing:

- Focus to intent rather than separate features. Zoning into scopes, one zone could have different features co-working and being related. Examples:

  - Media zone (homepage, audio, PIG, photo, etc.)
  - Recording zone (playlist, channel banner, có INFO screen, etc.)
  - Game playing zone (GUIDE, DLB, etc.)
  - Trickplay zone (Channel banner, video type, video source, etc.)

- Some examples of exploratory testing tours

  - Guidebook tour (based on specs, documents, guidelines, etc.)
  - Overnight tour (never close the app, use the features continuously)
  - End-user view tour (make/collect real use-case then test)
  - Garbage-collector tour (word-by-word, case-by-case, screen-by-screen, feature-by-feature, etc. Test every corner of the software but not very deeply in details)

1. Highlights

3. Discussed points

a) Personal factors:

- Knowledge
  - **System/product understanding. Deeply (feature, work-flows, bug flows, etc.).**
  - Mission understanding
  - Experience on using similar system (feature, habit understanding)
  - Personal experience (user understanding, supportive tool from 3rd party)
- Techniques/Skills
  - Time/task management
  - English
  - Team-working
  - Quick study
  - **Self study**
  - **Analysis**
  - Search skill
  - Coverage (bug fix coverage, feature coverage, etc.)
  - **Problem solving**
  - **Logic**
- Mindset
  - Emotion (consequences from working environment)
  - Appetite/desire
  - Concentration
  - Goals
  - Spirit/Will (honest, destructive/constructive, never satisfied, never failed, show myself, etc.)
- Personal hobby and habit (logic bug, UI bug, programming bug, etc.)

b) Environment factors → claim to a perfect environment:

- Obvious task/mission
- **Good support (communication channels, support channels)**
- Good test environment (device, equipment ready, stable, low risk on operating)
- **Joy (good working environment, etc.)**
- **Good process (clear, simple, and effective)**
- Good preparation documents (clear requirement (understand of deliverables), design, test case, test data, etc)
- Other objective factors

2. Advantages and limitations (of EBT)

Advantages

1. Utilizing the skills and experience of the tester
   - Testers know everything
     - How the software is used and for what purpose
     - What functionality and features are critical
     - What problems are relevant
     - How the software was built (risks, etc.)
   - Testers are creative
     - What to target to find the biggest bugs quickly
     - What is the risk zone and limitation.

2. Enables fast learning and improving testing
   - Investigating, searching, finding, combining, reasoning, deducting, ...

3. Testing intangible properties
   - “Look and feel” and other user perceptions

2. Advantages and limitations (of EBT)

Advantages

4. Process
5. Quickie and flexibility
   - Easy and fast to focus on critical areas
   - Fast reaction to changes
   - Ability to work with missing or weak documentation
6. Effectiveness
   - Reveals large number of relevant defects
7. Efficiency
   - Low documentation overhead
   - Fast feedback

2. Advantages and limitations (of EBT)

Challenges and limitations

1. Planning and tracking
   - How much testing is needed, how long does it take?
   - What is the status of testing?
   - How to share testing work between testers?
2. Managing test coverage
   - What has been tested?
   - When are we done?
3. Logging and reporting
   - Visibility outside testing team
     - or outside individual testing sessions ?
4. Quality of testing
   - Depend on quality of tester's work.

3. Methodology

Base on the fact that:

Most testing benefits from experience, but no special experience is necessary to do Exploratory Testing

We suggest to:

1. Convert (realize) all experience into Exploratory Testing plans
2. Re-define an exploratory plan to contain:
   - Approach method (Strategies, tactics)
   - Effective techniques
   - Guiding questions
   - Test patterns (historical data)
   - etc.
3. The manual must be organized for all kinds of indexing to quickly refer (e.g. By function, By question, By scenario, By kind of bug, etc.)
4. The manual and tester must be refreshed by a plan (learning/comparing from/to practice and updated).

Goals:

1. Each tester could inherit the benefit from experience
2. Each tester will have all exploratory plans in one manual
3. The manual is realistic and usable
4. Tester's knowledge and techniques are realistic and alive.

4. Planning and Implementation

Everything is ready.

(Strategy → Tactic → Technique → Skill as the backbone)

I. Process (way to apply):

A.	Training tester	(*Learn*)	← 1
B.	Guiding test execution	(*Do*)	← n
C.	Test documentation and tracking	(*Learn from B*)	← n
D.	Test patterns for different situations	(*Redo – refresh plan*)	← n

II. Preparation phase

- ❑ Make Exploratory plans
- ❑ Make support plan
  - ✓ Must cover “Environment factors”
- ❑ Make training plan
  - ✓ Must cover “Personal factors”

5. Suggestion

A- The "Training"

1. **Beginner**
    1. Basic skill (end-user manipulation)
    2. Basic knowledge
    3. Understanding coverage

2. **Intermediate**
    1. Testing skills → necessary skills for the tester
        - ❑ Stay on track (Vui chơi không quên nhiệm vụ)
        - ❑ Scopes appropriately (Khoanh vùng hợp lý)
        - ❑ Investigates weird behavior (Không bỏ sót)
        - ❑ Writes precise bugs (Mô tả chính xác mọi hiện tượng)
        - ❑ Picks their fights (Bỏ con săn sắt bắt con cá rô, focus vào lỗi quan trọng hơn)
        - ❑ Stands their ground (Giữ vững lập trường, thuộc về negotiation để bug được fix)
        - ❑ Makes time for training (Tự học và khám phá mọi lúc mọi nơi)
        - ❑ Never stops testing (Dừng lại là chết)
        - ❑ Careful observation (Quan sát tỉ mỉ, bug nó rất nhỏ và lẹ)
        - ❑ Combination skill (designing skill) (Khả năng phối hợp linh kiện, mô hình hóa sự tương tác)
        - ❑ Investigation/Analysis (Tìm và diệt trên từng cm)
    2. Exploratory Testing plans (how to apply Strategy → Tactics → Skills/Techniques efficiently on different situations)

3. **Advanced**
    1. The spirit → this is working as a supporter (cổ động viên)
        - ❑ Never no bug (luôn có bug)
        - ❑ Think of the "impossible" (không thể thành có thể)
        - ❑ Excited by bugs (hưng phấn, "máo")
        - ❑ Never say "No" (không chê bug)
        - ❑ The tour could suggest ideas (sức khỏe dẻo dai, tinh thần sảng khoái)
    2. The mind (skills of mind) → this is working as a guide (người dẫn đường)
        - ❑ Questioning - Đặt câu hỏi
        - ❑ Critical Thinking - Tư duy phản biện
        - ❑ Lateral Thinking - Tư duy bao quát
        - ❑ Imagination - Tưởng tượng
        - ❑ Has passion for the customer - Khả năng đóng thế (có suy nghĩ giống khách hàng)
        - ❑ Destructive v.s. constructive - Phủ định
        - ❑ Devious - Lạng lách
        - ❑ Quirky - Lắt léo
        - ❑ Curious - Tò mò
        - ❑ **Logic** - **Khả năng phân biệt**
        - ❑ **Systematicality** - **Khả năng nắm bắt toàn cục và chi tiết**

5. Suggestion

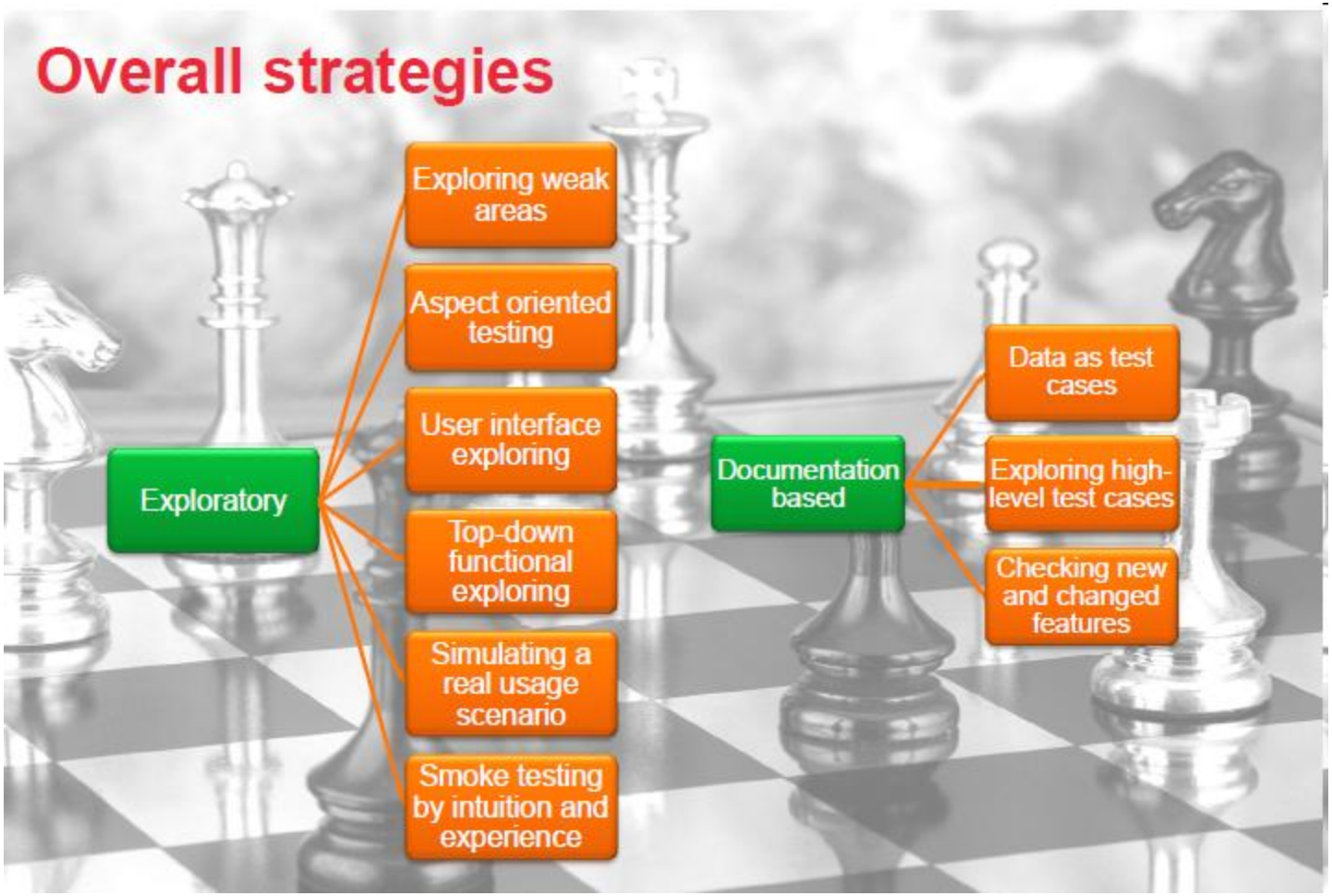
B- The “Guiding test execution”

- The process to “coupling” Leader and Tester
- Guiding Leader on supporting/guiding tester to execute, to think.
- Guiding Tester on how to get support and direction
- Guiding Leader on how to do C and when will move to D

5. Suggestion

C- The "Test documentation and tracking"

1/ Strategies



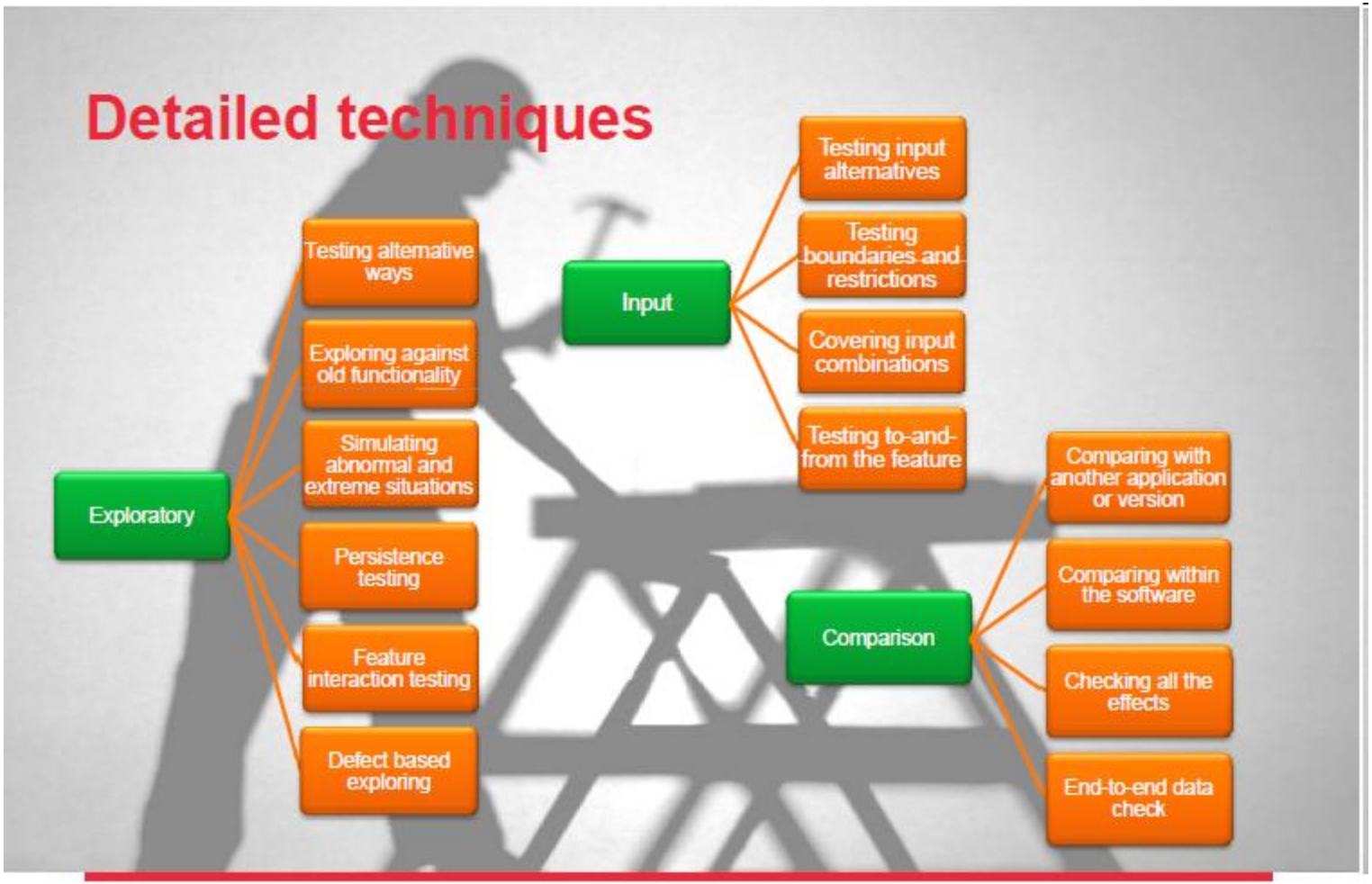
5. Suggestion

2/ Tactics

- **Honesty**
  - Test directly the detailed functions, the whole feature.
- **Comparing**
  - Feature to feature
  - Function to function
  - Context to context
  - Etc.
- **To-and-from the feature (by the width)**
  - What the others affect to the feature
  - What the others affected by the feature
- **To-and-from the feature (by the depth)**
  - What the others affect to the feature
  - What the others affected by the feature

5. Suggestion

3/ Techiques



5. Suggestion

D- The “Patterns” → TBD

Questions

Thank you

THANK YOU

Inquires regarding the above may be directed to:

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