



STAG Software Private Limited

**Accelerate defect detection via  
Hypothesis Based Testing (HBT)**

**Clean Software.  
Guaranteed.**

Session at Softec 2011 Conference

Hyderabad , March 26, 2011

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Founder & CEO

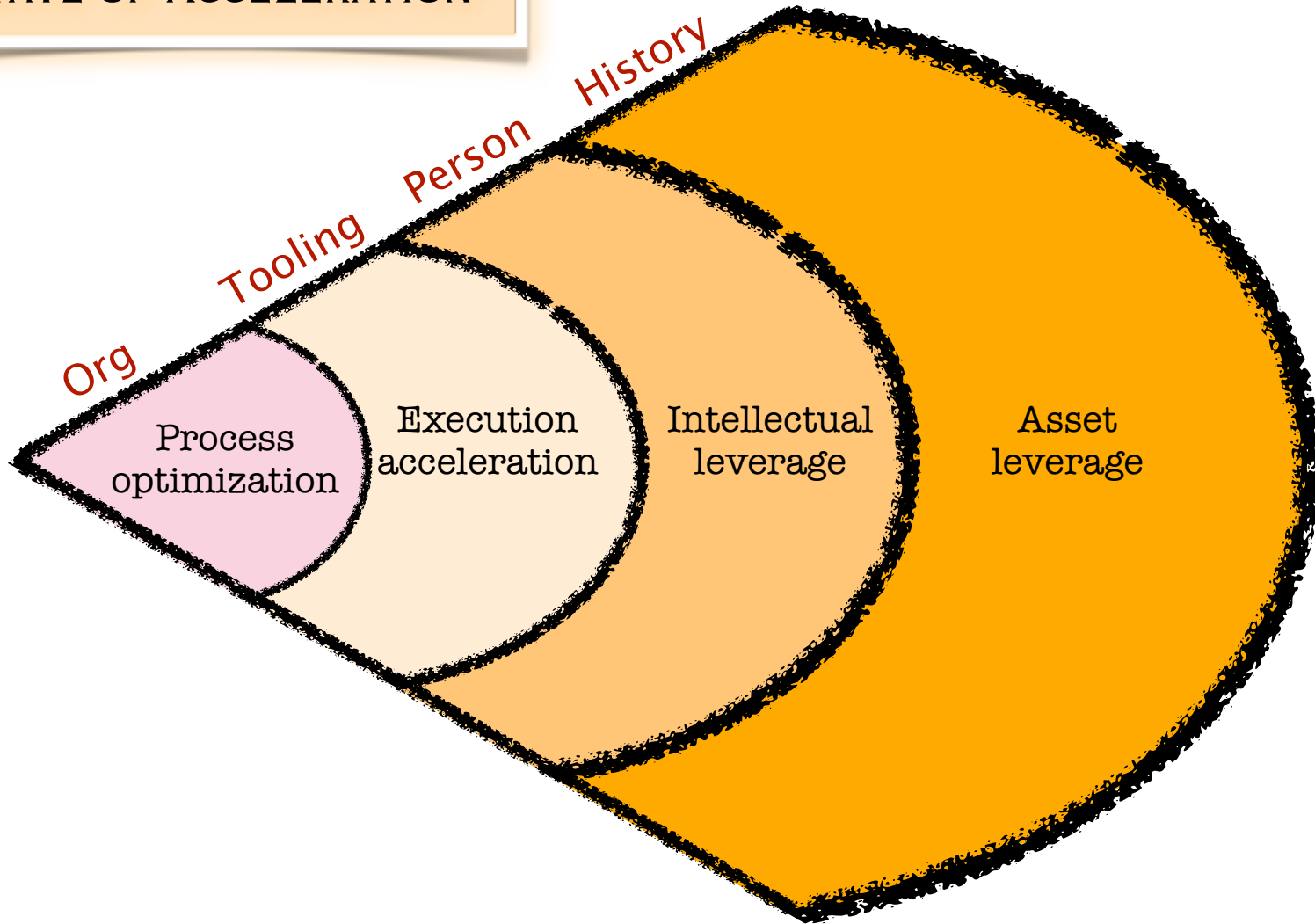
STAG Software ([www.stagsoftware.com](http://www.stagsoftware.com) )

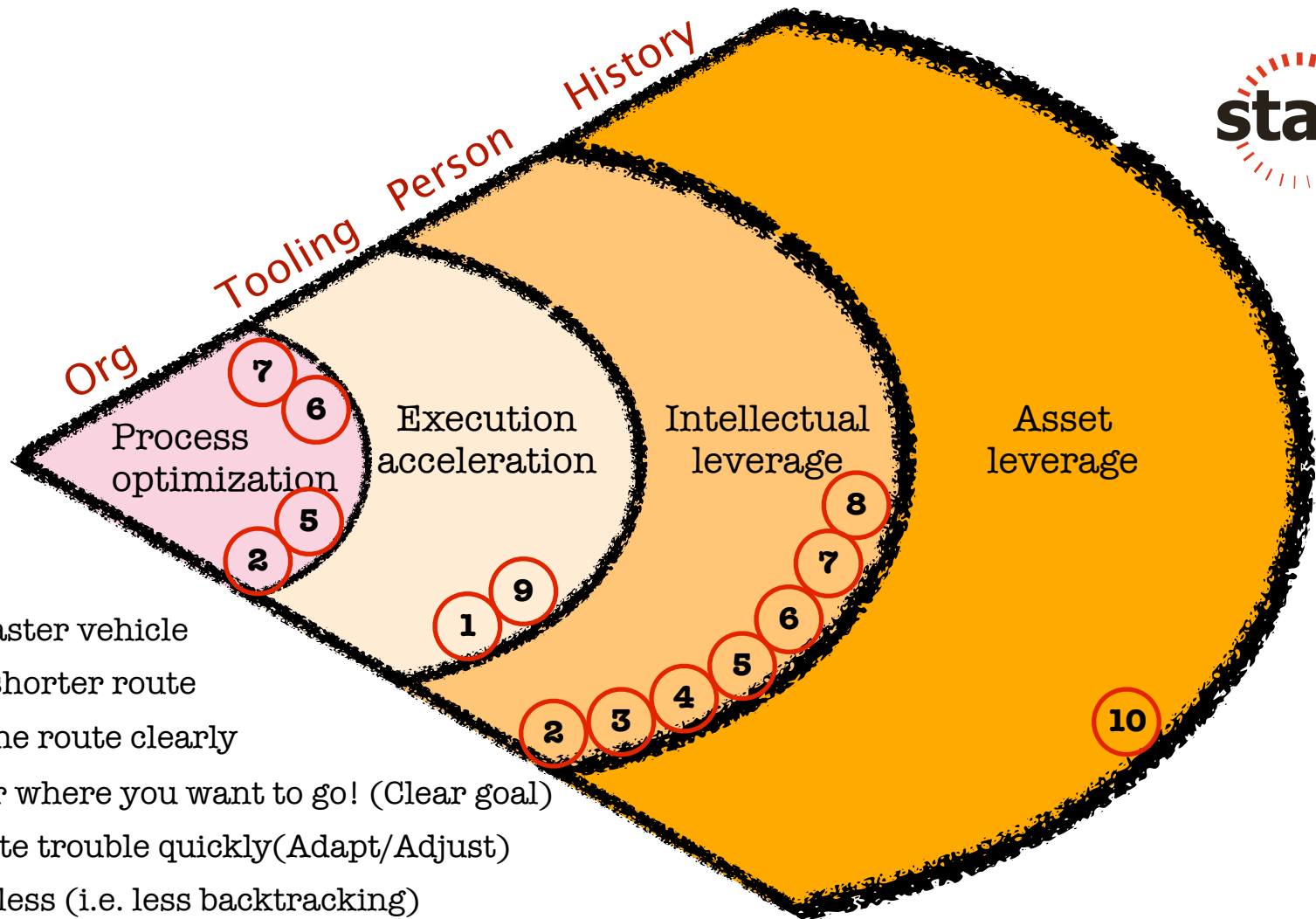
# HOW CAN WE GET TO A PLACE FASTER?



1. Buy a faster vehicle
2. Find a shorter route
3. Know the route clearly
4. Be clear where you want to go! (Clear goal)
5. Negotiate trouble quickly (Adapt / Adjust)
6. Detour less (i.e. less backtracking)
7. Drive carefully (lane & driving discipline)
8. Keep track of where you are
9. Use good vehicle & fuel (good technology)
10. Use learnings from others who have used that route

EXPANDING  
“WAVE OF ACCELERATION”





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# 1. Be clear where you want to go! (Clear goal)



## Expectations

How good?

Marketplace  
Environment  
Business value

## Needs

What do I want?

End users  
Requirements  
Features  
Attributes  
Usage



**Cleanliness criteria**

### **Example: Clean Water implies**

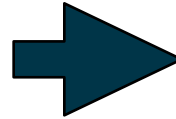
1. Colourless
2. No suspended particles
3. No bacteria
4. Odourless

**ACCELERATE UNDERSTANDING/RAMP-UP**

- 2. Know the route clearly
- 3. Use learnings from others



**Cleanliness criteria**



What types of defects do I need to uncover?	
  	<u>Example:</u> Data validation Timeouts Resource leakage Calculation Storage Presentation Transactional ...

HYPOTHESIZE  
POTENTIAL DEFECT TYPES

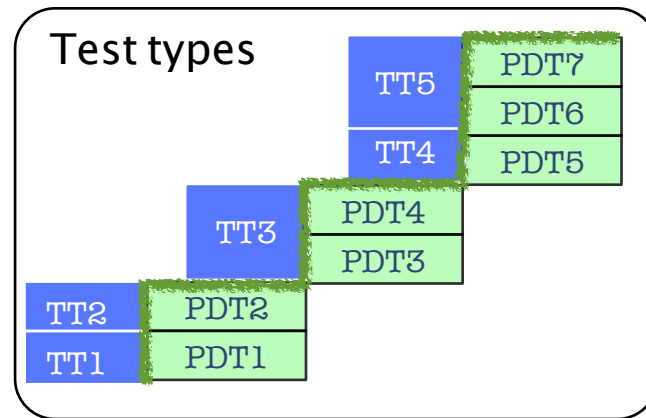
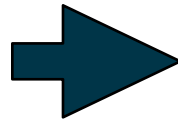
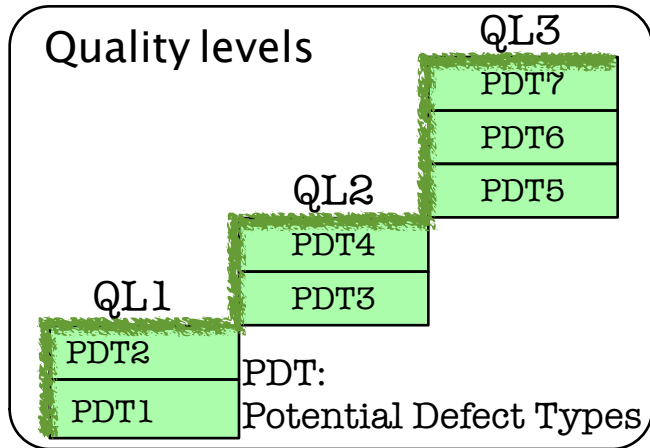
**Potential defect types**

**ACCELERATE GOAL CLARITY**

# 4. Find a shorter route (optimal)



Potential defect types



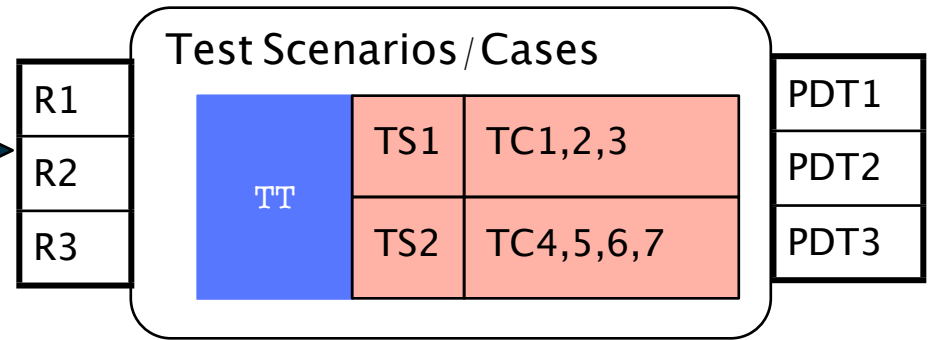
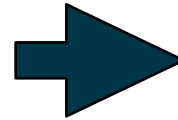
Staged & purposeful detection

OPTIMIZE TESTING

- 5. Drive carefully
- 6. Detour less



**Staged & purposeful detection**



Requirements & Fault traceability

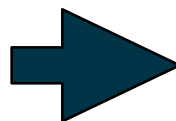
**Complete test cases**

**COVER MORE GROUND**



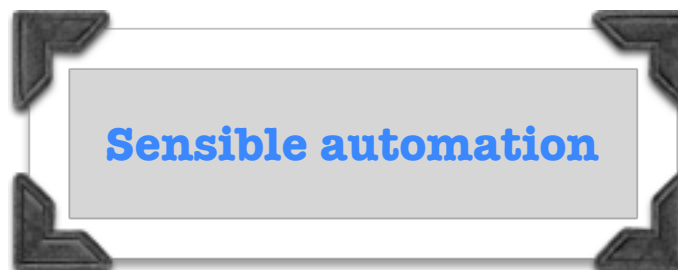
7. Buy a faster vehicle

8. Use good vehicle & fuel (good technology)



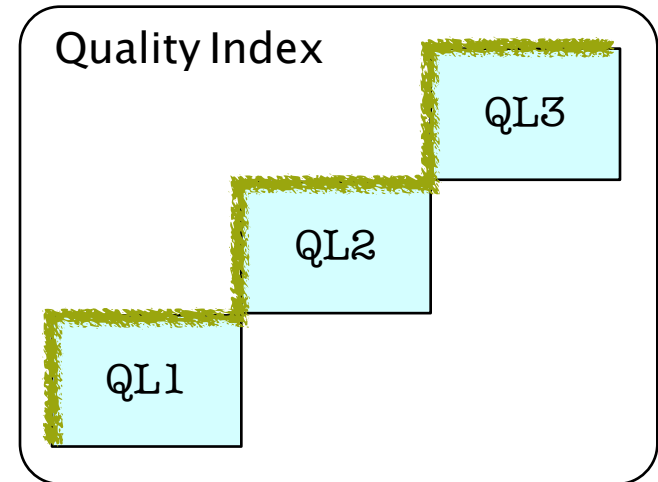
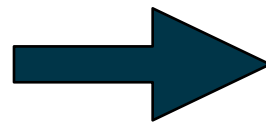
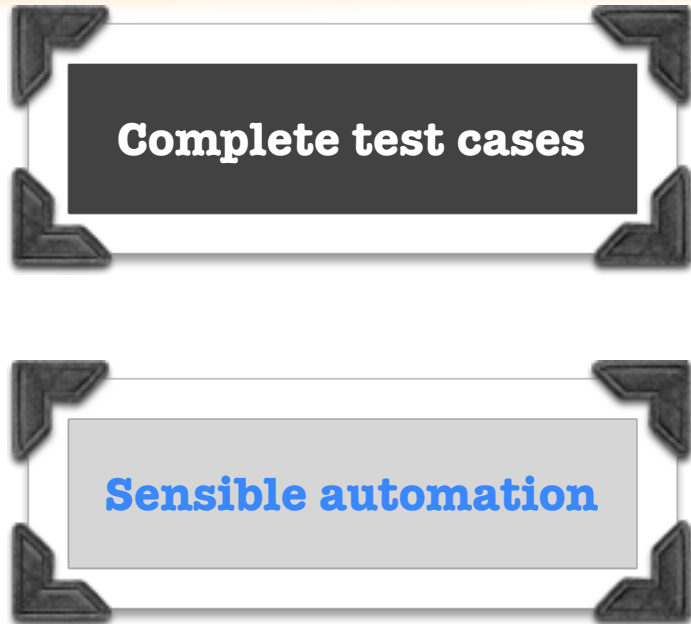
Tooling and scripts

Better ROI

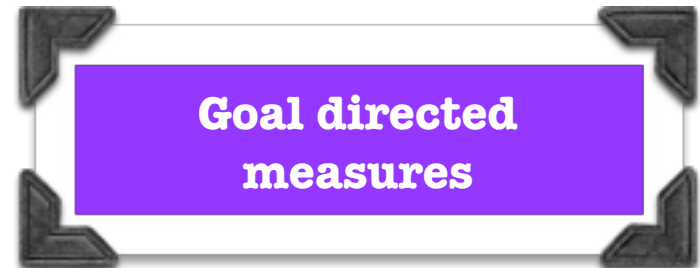


**MOVE FAST**

- 9. Keep track of where you are
- 10. Negotiate trouble quickly

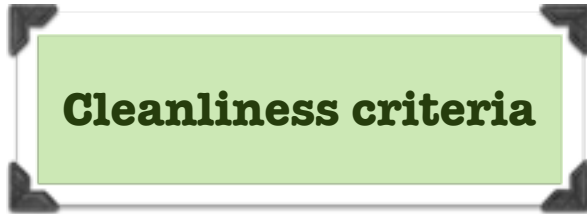


Quality, Progress & Risk

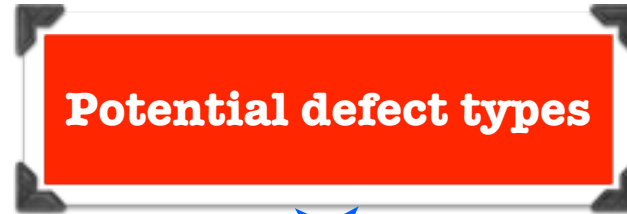


COURSE CORRECT QUICKLY

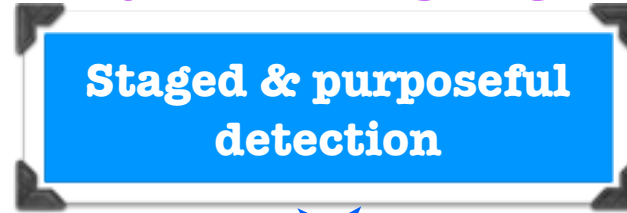
## ACCELERATE UNDERSTANDING



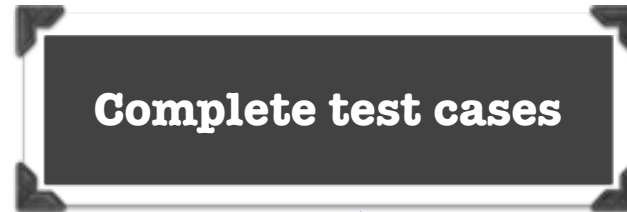
## ACCELERATE GOAL CLARITY



## OPTIMIZE TESTING



## COVER MORE GROUND



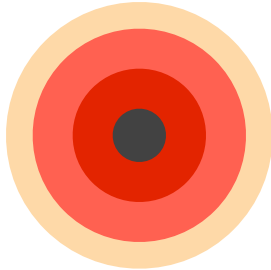
## MOVE FAST



## COURSE CORRECT QUICKLY



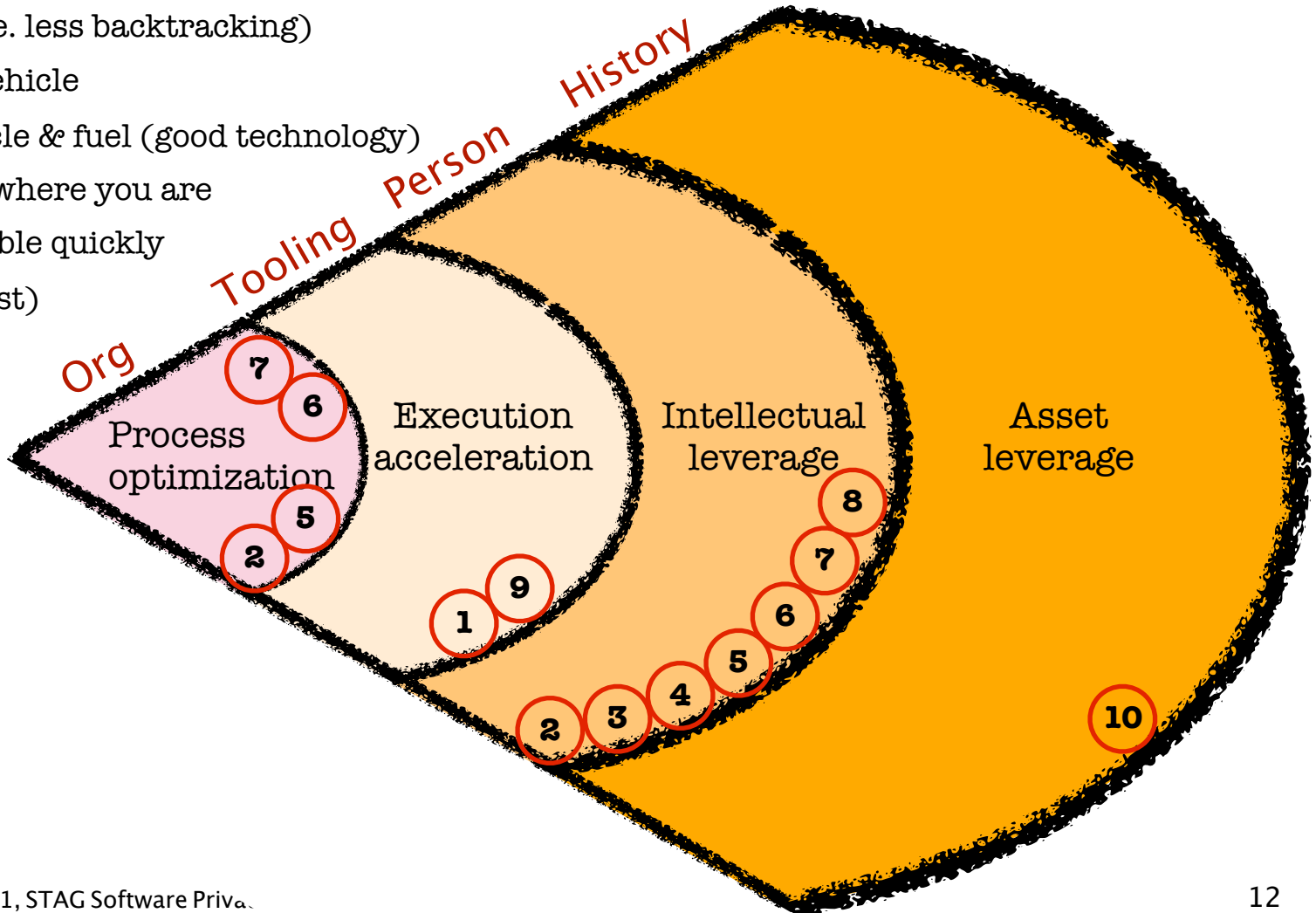
**Expectations**



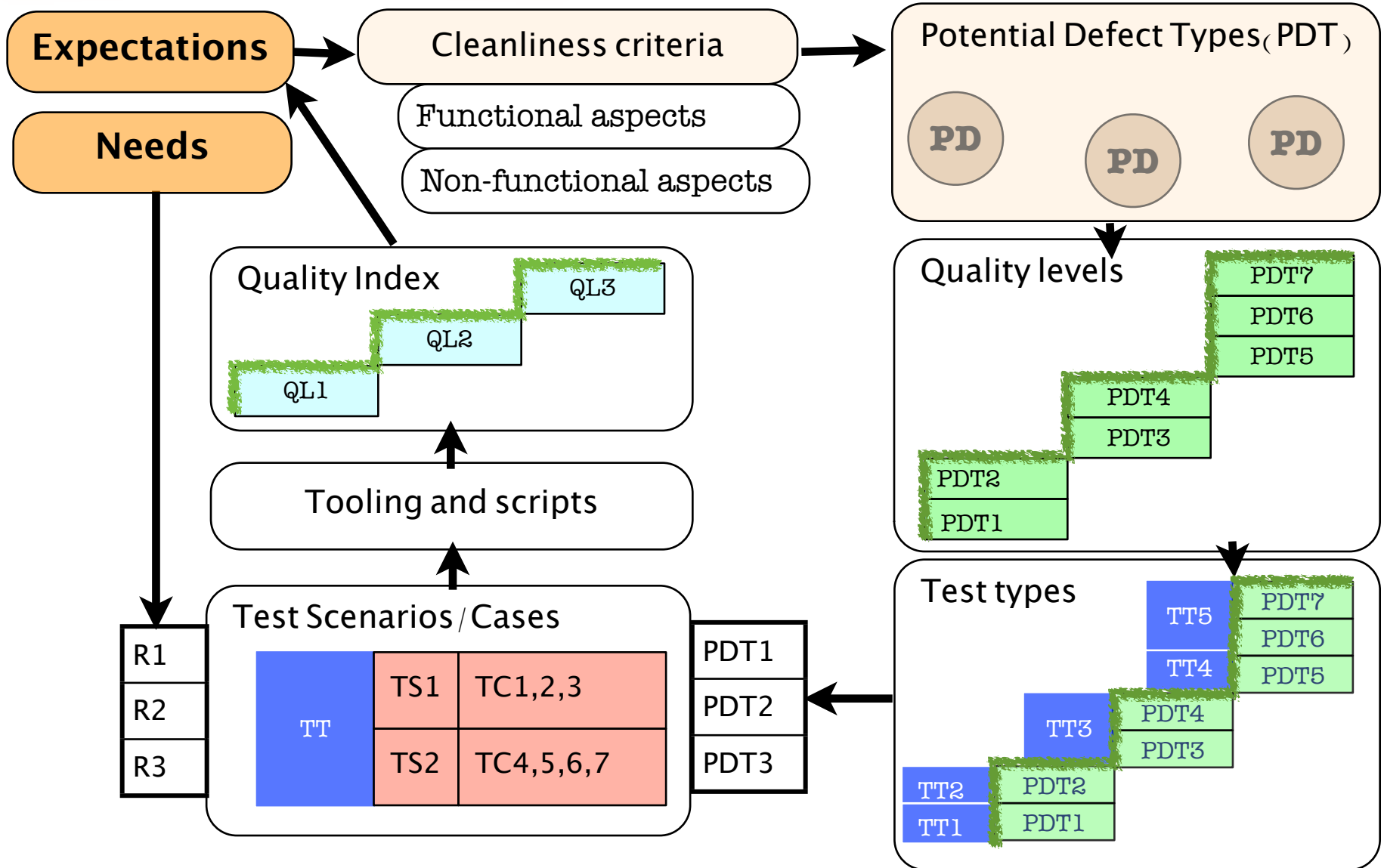
## Reordered...

4. Be clear where you want to go!
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(Adapt/Adjust)

ACCELERATE UNDERSTANDING  
ACCELERATE GOAL CLARITY  
OPTIMIZE TESTING  
COVER MORE GROUND  
MOVE FAST  
COURSE CORRECT QUICKLY



# HBT PICTORIAL



# HBT RESULTS



**10x reduction in post-release defects**

**Re-architecting test assets increases test coverage by 250%**

**30% defect leakage reduction from early stage**

**Test assessment accelerates integration**

**Terse requirement - Holes found & fixed at Stage#1**

**Smart automation - 3x reduction in time**

*Thank you - Have a great day!*