UX? What about TX for Test Automation?

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Three key points

- Test automation requires consideration of the UX for the tool and the tests;

- People who use automation might not always be technical but they are always human;

- UX-D and UX-T for test automation supports improved decision making and quality.

"Test automation requires consideration of the UX for the tool and the tests"

What is UX?

User eXperience

UX-D (Design) and UX-T (Testing)

Making life better
-
example Cyclist's UX

Explanation and ref for previous slide

"X: Ignorance – "We don't have problems with usability" Usability is not discussed as an issue.

A: Uncertainty – "We don't know why we have problems with usability" User-Centred processes are not implemented, or fail to achieve their purpose.

B: Awakening – "Is it absolutely necessary to always have problems with usability?" User-Centred processes are implemented but are performed by inappropriate staff using sub-optimal methods

C: Enlightenment – "Through management commitment and improvement of human centred processes we are identifying and resolving our problems" User-Centred processes are implemented and produce results, but these results do not always give the expected benefits to the software development process

D: Wisdom – "Usability defect prevention is a routine part of our operation" User-Centred processes are integrated into the software lifecycle and used to improve all work products

E: Certainty – "We know why we do not have problems with usability" The culture of the organisation is user-centred

The experience of the INUSE and RESPECT projects is that much of European industry is at level 1, 2 or sometimes 3 on this scale."

Journal of System and Software, 1999 (in press) **Quality in Use: Meeting User Needs for Quality** *Nigel Bevan* Serco Usability Services

This is the shape of the presentation:

- We are following a UX method
- Generic examples
  - A user of Apple computers
  - A hospital consultant
  - An IT service desk support person
- Specific test automation example

"People who use automation might not always be technical but they are always human"
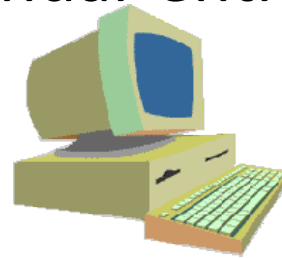
Who are these people?

Ordinary people
Technical people

Generic Example Personas
(people with emotions)

Apple Lover "It was so beautiful I wanted to marry it
And then it lost my calendar entries and emails"

Consultant Doctor "This is the clunkiest piece of technology I have ever had to use;
I will have to ask my secretary to print your test results"

Generic Example Personas (people working with technology)

Moving IT Service Management to the 21st century

"Ethnographic research paints a sad picture of the current state of the ITSM market.

…vision is to build a solution designed for humans, not processes."

http://blogs.ca.com/2016/01/27/moving-it-service-management-to-the-21st-century/

Technical People on software projects

Why would I want to use a tool called Github?

Too many geeks are making Automation Script piles for other geeks, and [calling it] a tool!

it is like working with something designed to be used by a 12-year-old boy in his bedroom in the 1980's

a lack of consideration for how people work and think ... basically it's still the mindset that the human adapts to the computer, not vice-versa

Alarming Development

"Programming is so hard that only highly talented, trained, and dedicated individuals can do it passably well. The inescapable conclusion is that programming as we know it is just unnatural for humans. The solution is to

reinvent programming to suit human cognitive skills

to program the way we think. This is a matter of usability. The sad fact is that modern programming languages are usability disasters, full of design mistakes inherited from earlier eras."

http://alarmingdevelopment.org/

Developers Liberation Front

Developers Liberation Front

Software developers only use a **small subset** of the available tools, and those that a developer does use are often **not fully leveraged**.

"We believe that the solution to this problem can be found by

rethinking the design of

software development tools

based on a better understanding of why developers use and do not use these tools."

"UXD and UXT for test automation supports improved decision making and quality"

What decisions?

Trivial decisions
Life-changing decisions

Software Dev / Test Tool users?

The test tool marked all the tests as passed except 1, but in fact none of the tests marked "passed" had actually run…

so now I wanna know why raising a string exception is bad. Like what should I be doing instead? Since it thinks it's a problem. And so none of these [messages] really help me

I spend 50% of my time wrestling with the technology instead of solving the problem I am working on

a lack of consideration for how people work and think … basically it's still the mindset that the human adapts to the computer, not vice-versa

I need to know… NOW! …AGAIN! …AGA

WHY HAVEN'T WE RELEASED YET AND WHAT ARE THE RISKS?

WHAT DID I DO WRONG AND WHAT DO I CHANGE?

WHAT STEP DO I TAKE NEXT?

HOW MUCH LONGER WILL THIS TAKE?

"What about TX for Test Automation?"

Yeah, but how?

TX = Tester eXperience

Start to think TX

Identify WHO uses your tool

Identify WHY they use it

Identify WHAT they want to do

Identify their EMOTIONS and EMPATHISE!

Score the UX, Quality in Use (QiU) and Internal Quality (IQ) attributes
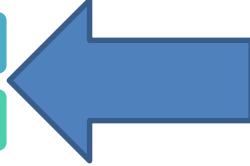
Write RICH STORIES
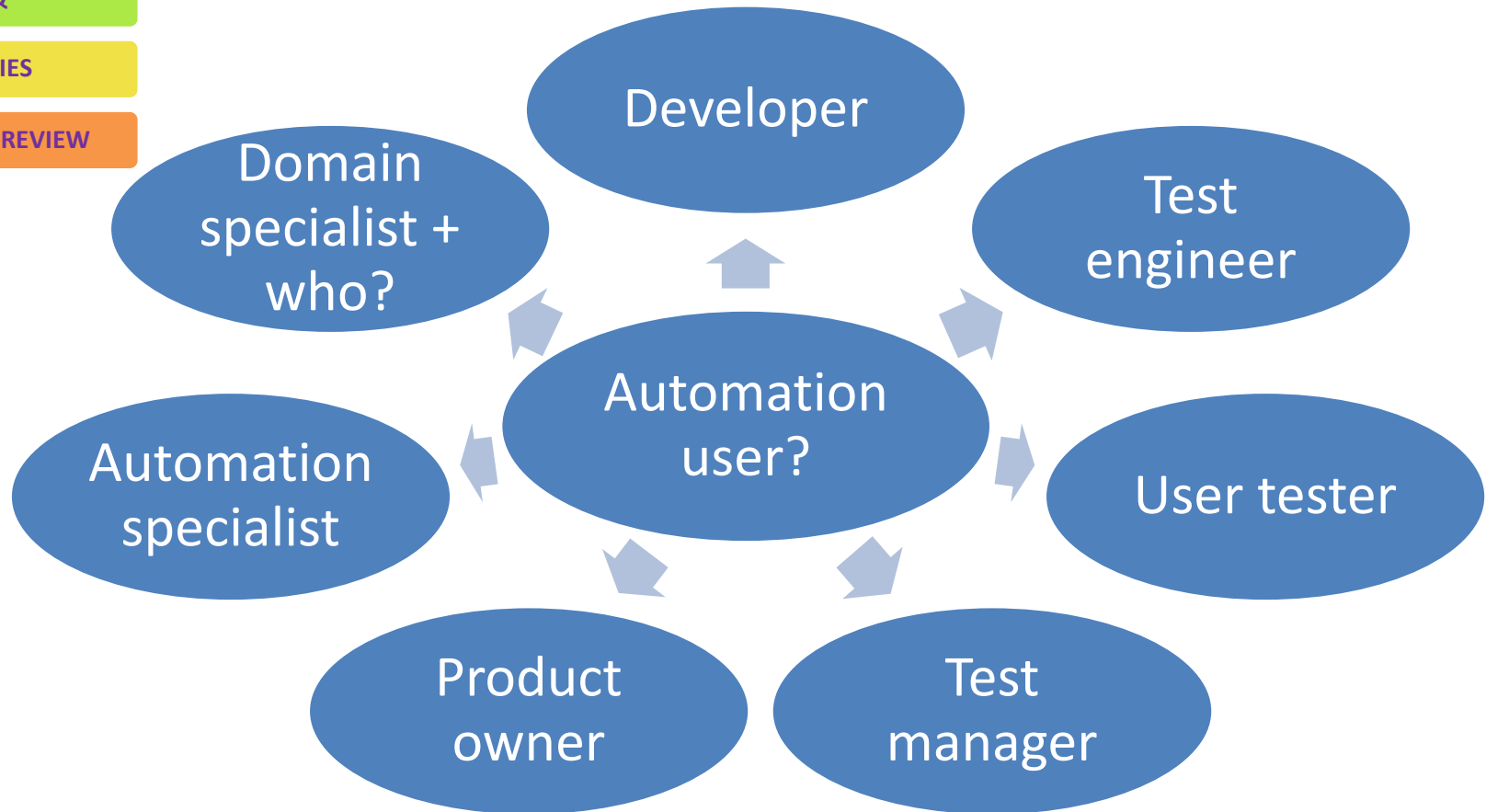
Do a USABILITY REVIEW

WHO

WHY

WHAT

EMOTIONS
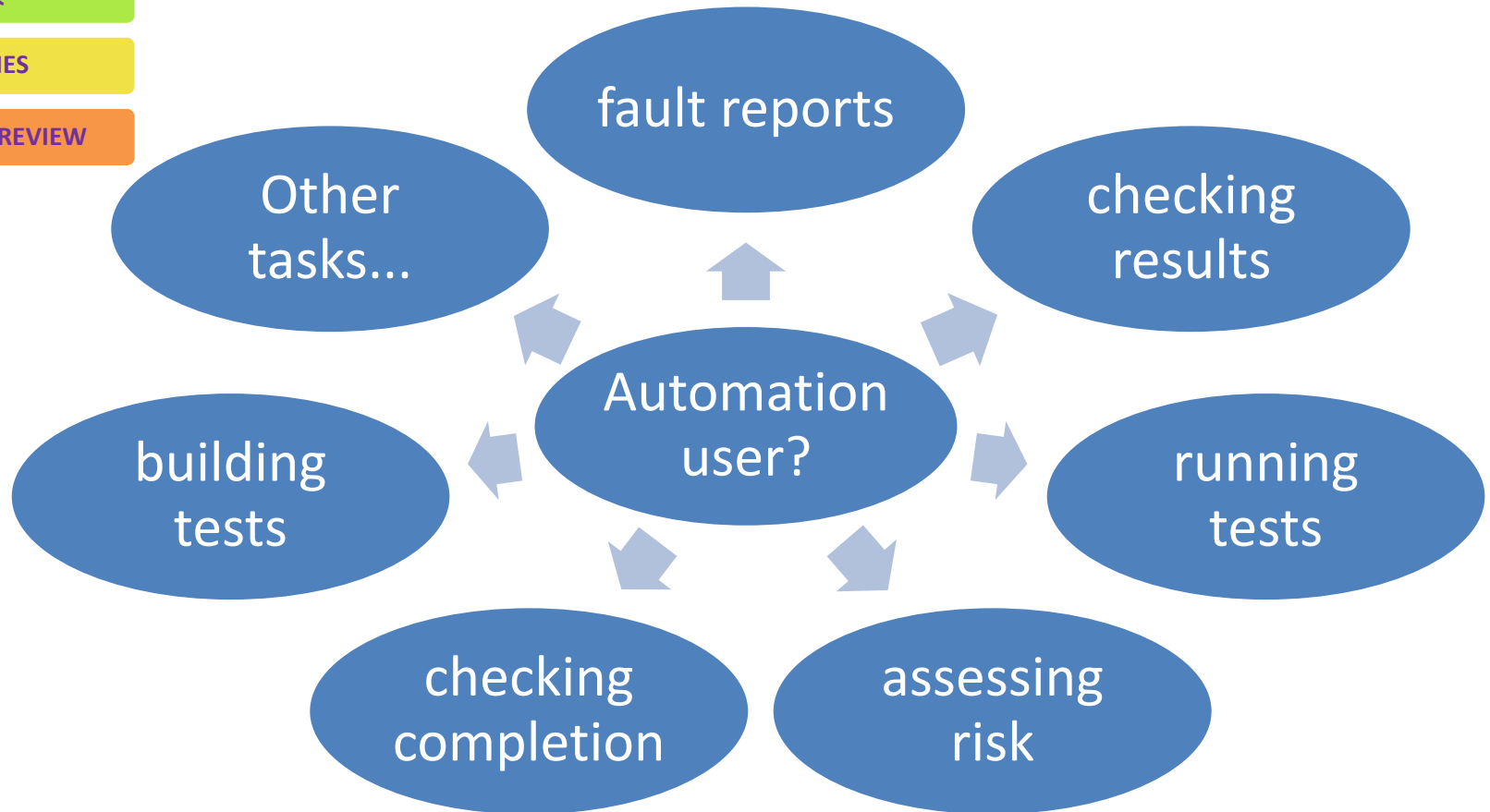
UX, QiU, IQ

RICH STORIES

USABILITY REVIEW

TX: Who? Why?

Developer

Test engineer

Domain specialist + who?

Automation user?

User tester

Automation specialist

Product owner

Test manager

TX: What tasks?

fault reports

checking results

Other tasks...

Automation user?

running tests

building tests

checking completion

assessing risk

EMOTIONS

TX: What emotions?
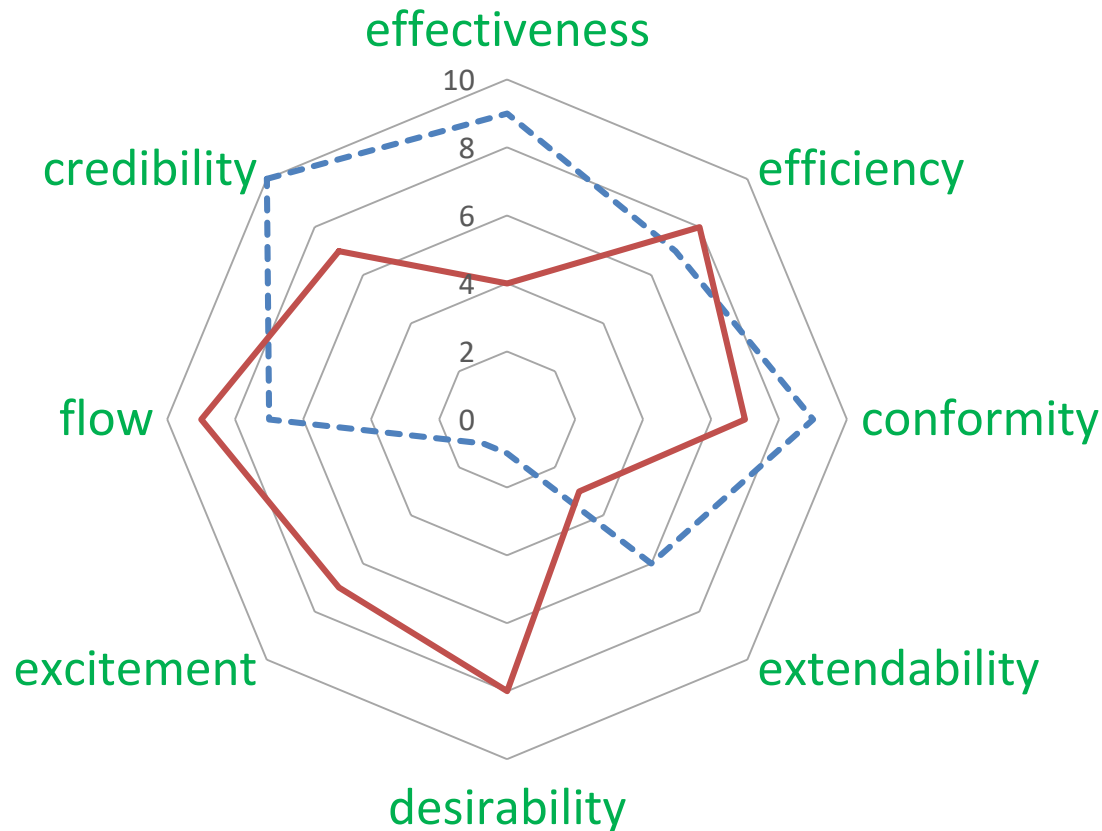
Images with range of emotions
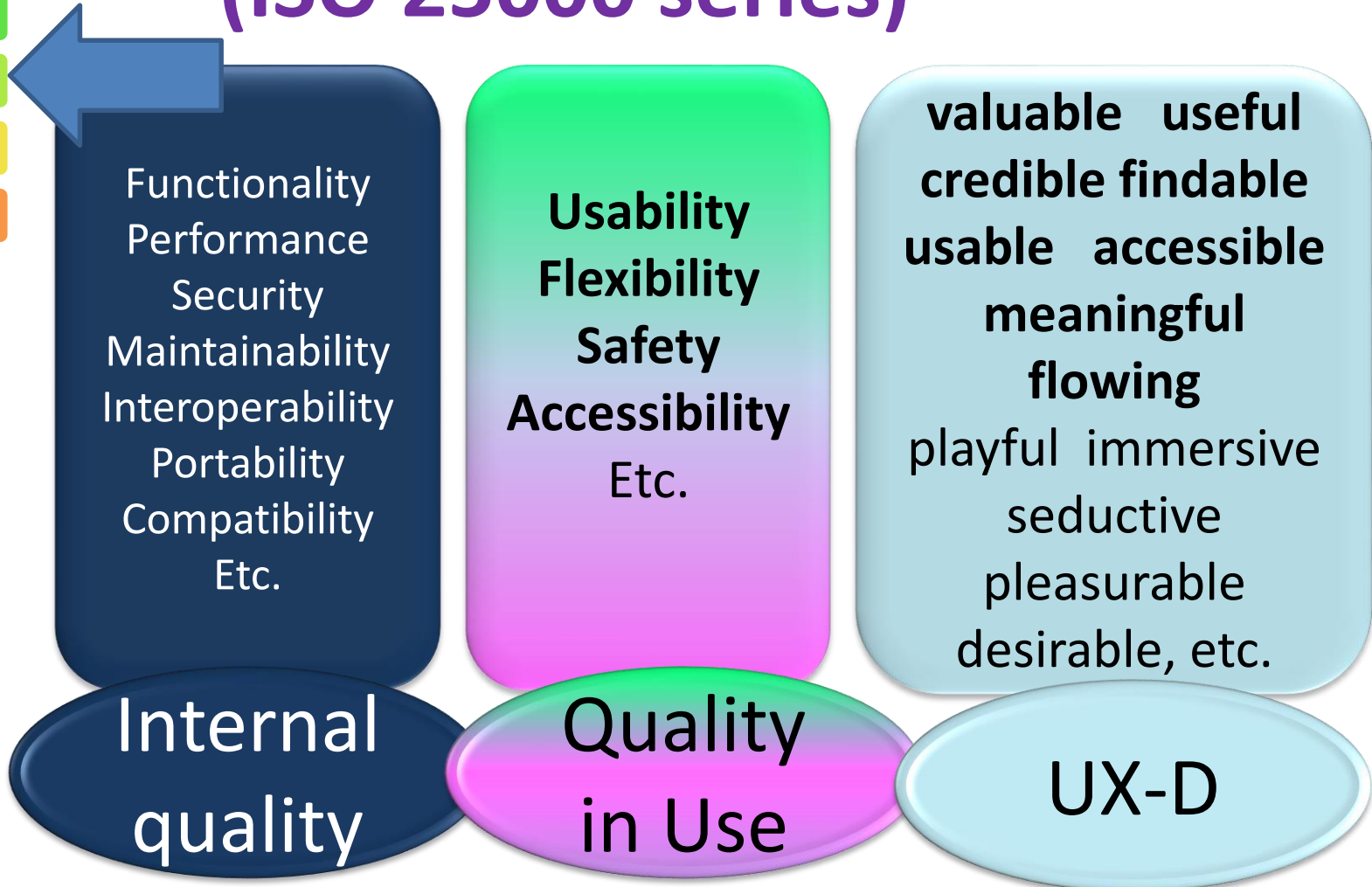
Attributes Generically:
Different people have different needs

Quality attribute expectations compared
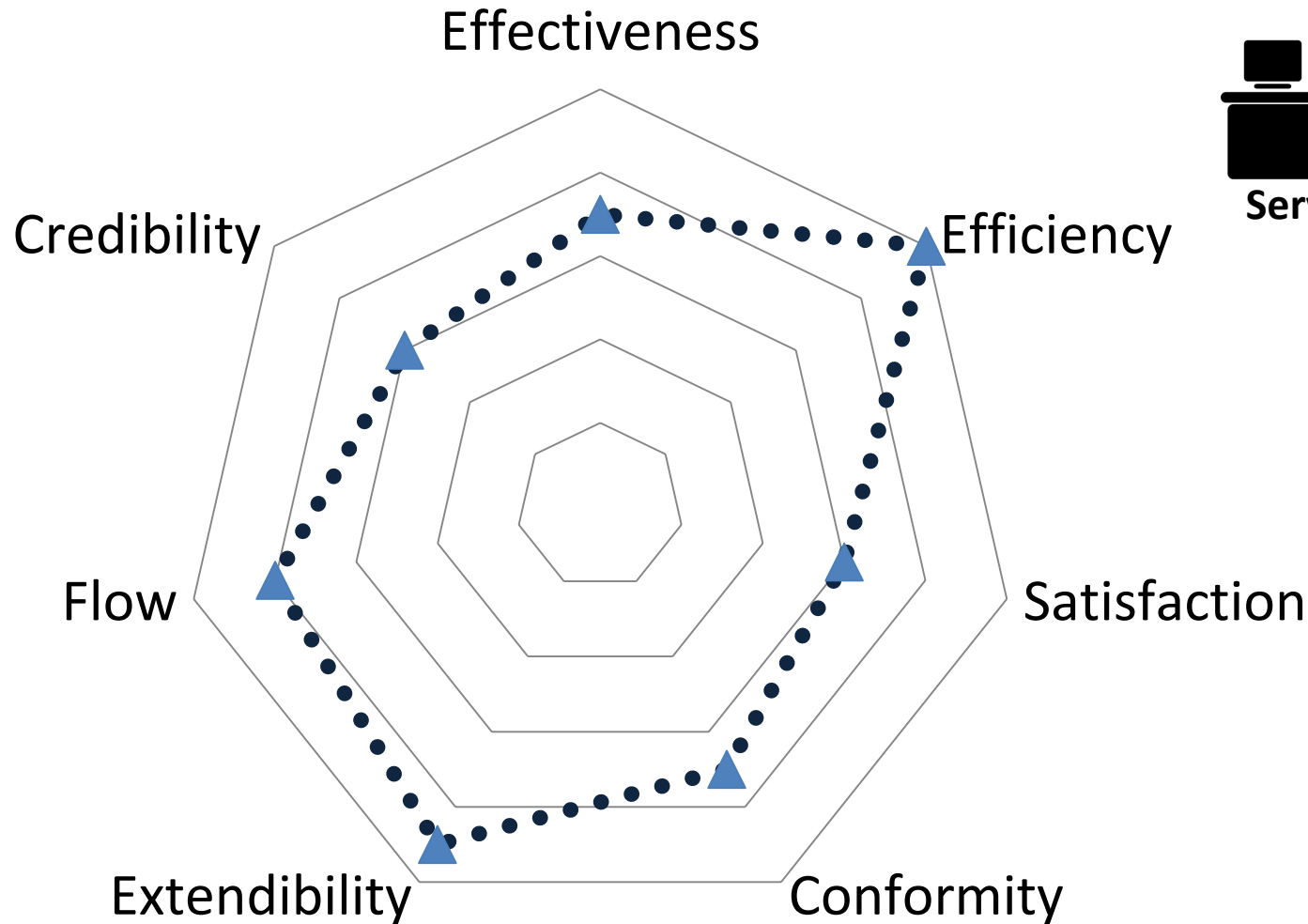
--- hospital consultant —— Apple lover

Attributes Generically:
Different people have different needs

Service Desk Worker

Effectiveness

Efficiency

Satisfaction

Conformity

Extendibility

Flow

Credibility

Attributes: Different automation users have different needs

WHO

WHY

WHAT

EMOTIONS

UX, QiU, IQ

RICH STORIES

USABILITY REVIEW

User Stories...

As a wookie,
I want to rrrrraaaaawwwrr
so I can rrwwwwaaarrgggghhh.

https://twitter.com/jediuserstories

User Stories…

@gojkoadzic user story format and some words of wisdom from an agile Australia conference

As a ____software developer____ I'm

____doing it wrong____ because

I think this template is a _____

replacement for talking to people

@sammy_lee12 Oct 10

Rich User Stories Generic Example 1
Apple lover

Flexibility

Interoperability, compatibility, portability

**Flow
Trust
Seductiveness**

"As a non-technical person
I want to transfer to the latest gadgets and software
without being tied to one source
Without losing my calendar entries and emails
Because **otherwise I am sad and frustrated**"

Rich User Stories Example 2
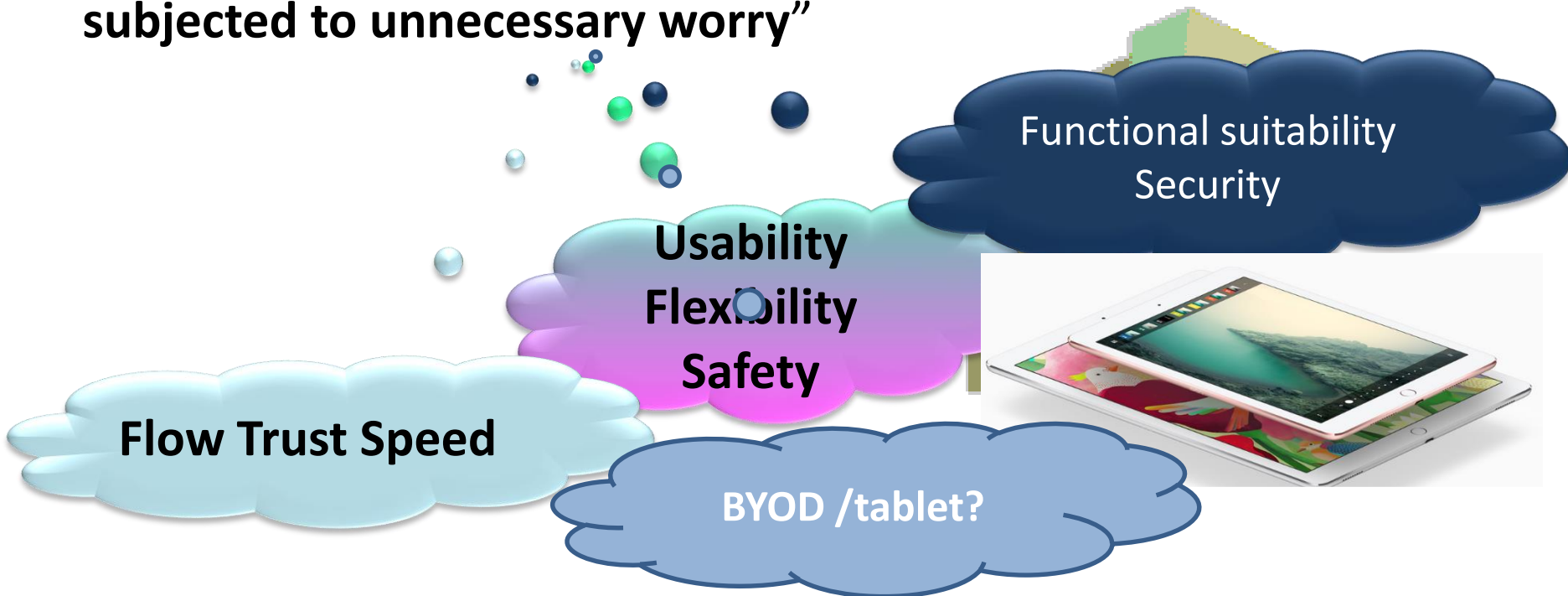# Hospital Consultant

"As a consultant doctor
I want to concentrate on treating my patients
and communicating well with them
I don't want to be blocked by the software
Because otherwise my patients and I become **frustrated and are subjected to unnecessary worry**"

Functional suitability
Security

Usability
Flexibility
Safety

Flow Trust Speed

BYOD /tablet?

# Rich User Stories Example 3
Service Desk Worker

As a service desk worker
I want to use software that supports the flow of my work
And **treats me like a human being**
And allows me to support my customers without frustration
So that **they and I can converse calmly and trust issue resolutions**

Flow
Trust
Speed

Usability
Flexibility

Performance
Functional suitability
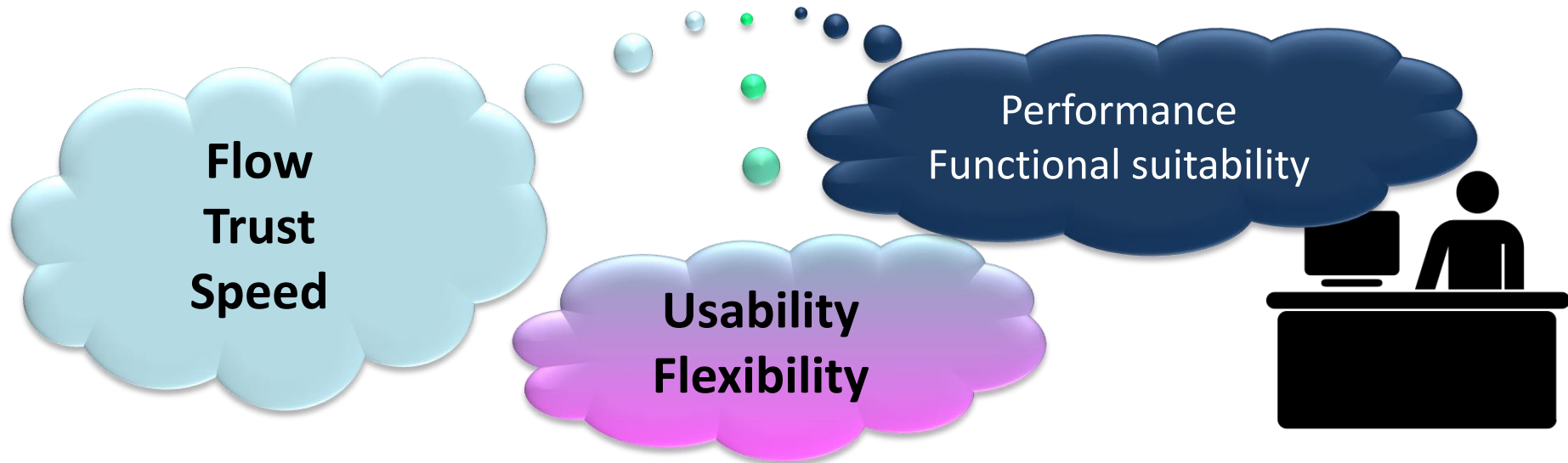
Test automation user: Rich User Story

As a domain specialist tester

I want to use software dev/test tools that provide me with information in my domain language

That don't force me to engage with technical issues

That provide information for the developers that they & I can trust

And don't make me feel stupid

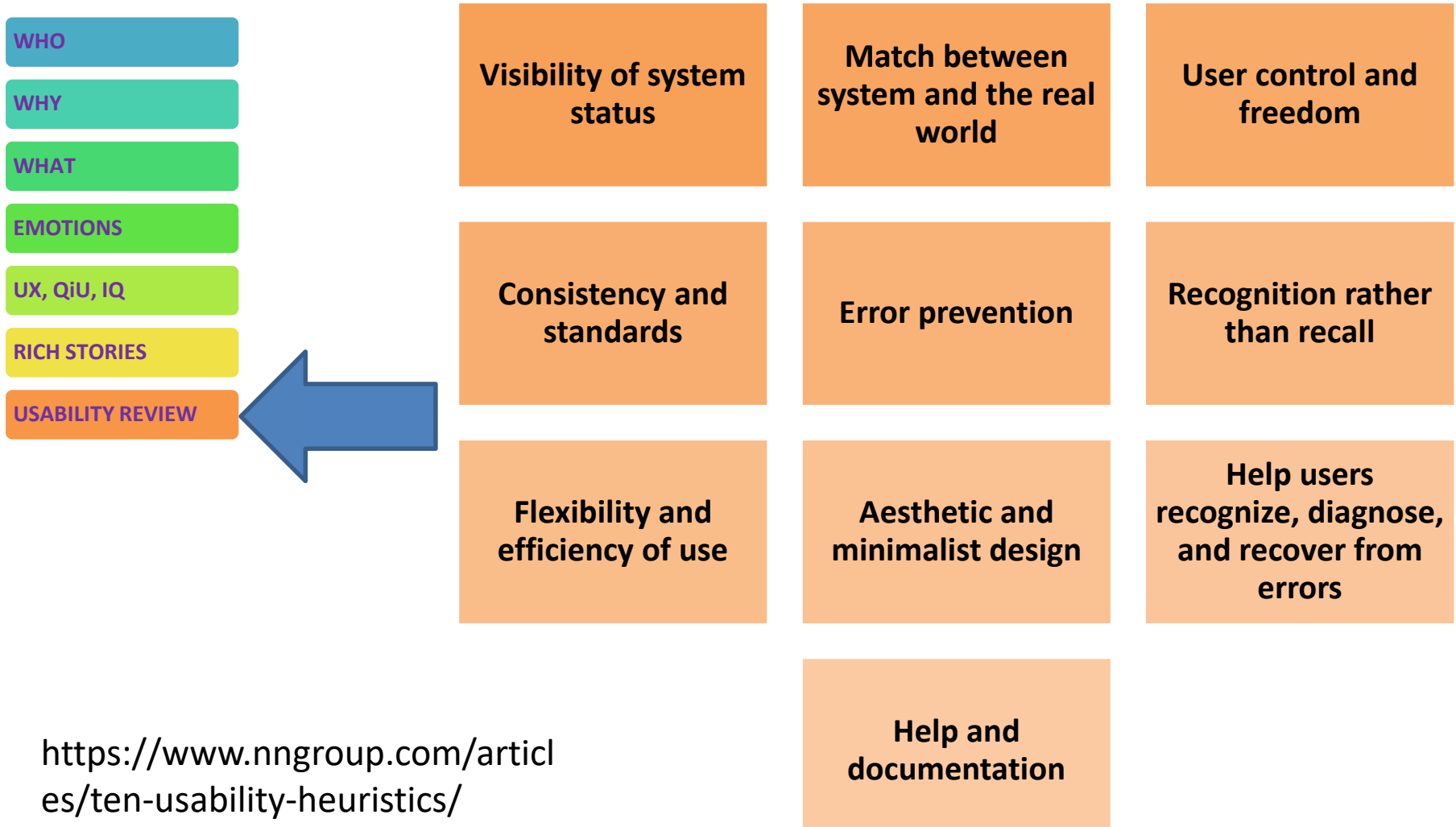So that we make decisions we both trust without interrupting our flow of work.

Functional Suitability

Usability
Effectiveness
Conformance

Flow, credibility, trust

Check your tools interfaces today…
Easy usability testing - Heuristic Evaluation

WHO

WHY

WHAT

EMOTIONS

UX, QiU, IQ

RICH STORIES

USABILITY REVIEW

Visibility of system status	Match between system and the real world	User control and freedom
Consistency and standards	Error prevention	Recognition rather than recall
Flexibility and efficiency of use	Aesthetic and minimalist design	Help users recognize, diagnose, and recover from errors
	Help and documentation	

https://www.nngroup.com/articles/ten-usability-heuristics/

"What about TX for Test Automation?"

And what are you doing, Isabel?

Tester eXperience Workbox Project

R&D

Awareness

Guidelines

Analytics

Prototyping

Meta-tool?

You?

You?

"What about TX for Test Automation?"

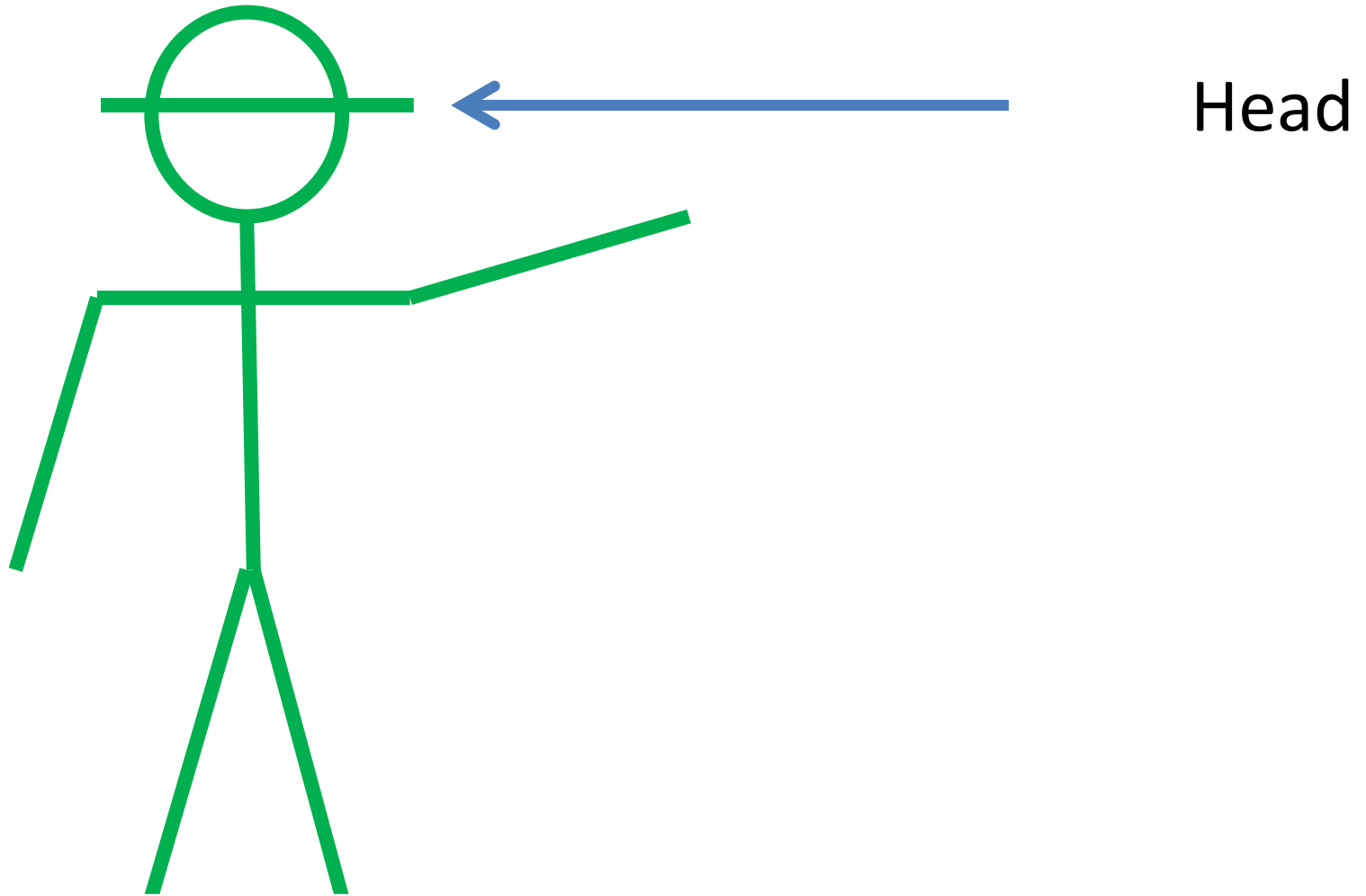# And what could you do, UCAAT conference and ETSI?

ETSI (conference handout)

"… ETSI's aim has always been to produce documents that are easy to understand and easy to use…"

Email me feedback on my blogposts

Links to blog and contact form on www.isabelevans.uk

- Why we need a better experience of software
  - [ref 1] http://bit.ly/2by8XuA Blog post
- Why we need a better toolset
  - [ref 2] http://bit.ly/2bM9DNj Blog post
- A vision for the future
  - [ref 3] http://bit.ly/2c0tEld Wiktionary definition
  - [ref 4] http://bit.ly/2bwAEsb Blog post

What do you test with?

Head

What do you test with,
when you test UX and think TX?
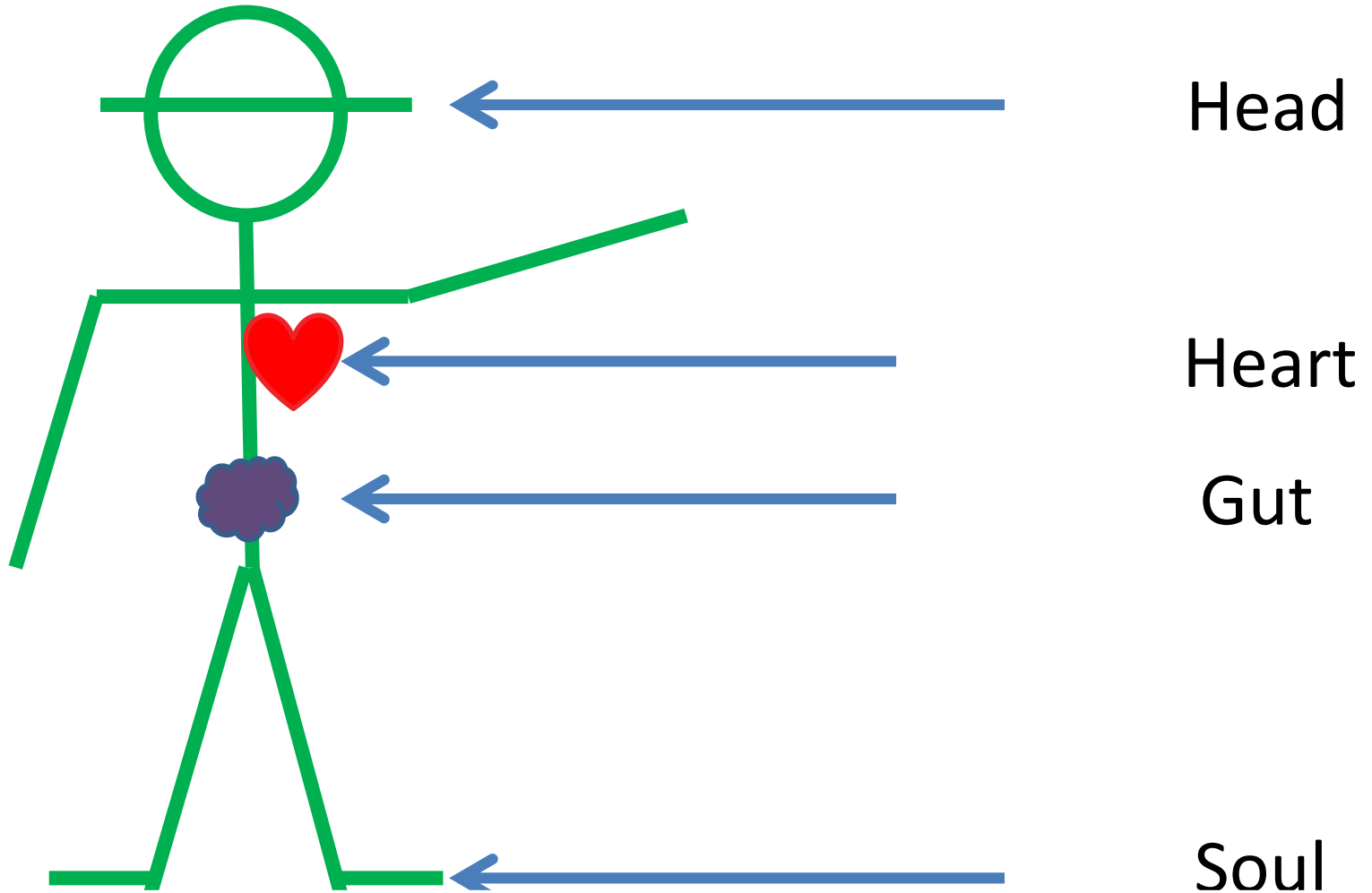
Head

Heart

Gut

Soul

Three key points

- Test automation requires consideration of the UX for the tool and the tests;

- People who use automation might not always be technical but they are always human;

- UX-D and UX-T for test automation supports improved decision making and quality.

References

- Quality in Use: Meeting User Needs for Quality, Nigel Bevan, Serco Usability Services Journal of System and Software, 1999 (in press)

- "The test tool marked all the tests as passed except 1, but in fact none of the tests marked "passed" had actually run" Quote from Fewster and Graham "Experiences of Test Automation"

- Quotes from attendees at the WII briefing meeting: "I spend 50% of my time wrestling with the technology instead of solving the problem I am working on" and "it is like working with something designed to be used by a 12-year-old boy in his bedroom in the 1980's". "Why would I want to use a tool called Github?"

- Gender and other bias in IT tools, for example in tool default behaviour, use of language, voice recognition, gendering of support tools, is increasingly being studied and remarked on e.g. http://huff.to/1I5pek4, http://bit.ly/1MXNTPf , http://bit.ly/2bfI5lY.

- Problems with customer support tools: "Ethnographic research paints a sad picture of the current state of the ITSM market.   …vision is to build a solution designed for humans, not processes" [http://blogs.ca.com/2016/01/27/moving-itservice-management-to-the-21st-century/]

- Evidence that tools do not work for IT people "…a lack of consideration for how people work and think … basically it's still the mindset that the human adapts to the computer, not vice-versa." (A Taxonomy of Tool-Related Issues Affecting the Adoption of Model-Driven Engineering by Whittle, Hutchinson, Rouncefield, Burden and Heldal)

- Evidence that developers do not find tools easy to use: "…so now I wanna know why raising a string exception is bad. Like what should I be doing instead? Since it thinks it's a problem. And so none of these really help me…" (Why Don't Software Developers Use Static Analysis Tools to Find Bugs? By Johnson, Song, and Murphy-Hill).

- ISO 25000 Series of standards (quality in use attributes)

- http://alarmingdevelopment.org/

- http://blogs.ca.com/2016/01/27/moving-it-service-management-to-the-21st-century/

- https://www.youtube.com/watch?v=oQ455i1aCQI

- https://www.nngroup.com/articles/ten-usability-heuristics/

- http://research.csc.ncsu.edu/dlf/

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