What on earth do we mean by "Service Quality"?

Rob Addy

Author of "Effective IT Service Management: To ITIL and beyond!"
(www.effectiveitsm.com)

Are you sitting in the right session?

- ## What on earth do we mean by 'Service Quality'?
  - Responsiveness, availability and goodness (whatever that is) are often cited as the core elements that make up service quality. Can the IT community learn from the Quality Management industry in order to clearly define and manage service quality to ensure that its customers and users are not only satisfied but delighted by the services they receive? This session looks at IT service quality from a 'conformance to requirements' point of view and helps identify how the IT function needs to radically rethink how it measures and expresses the quality of the services it provides.

A little about me…

What my publisher says…

- *Rob Addy is an ITSM professional with over a decade of hands on experience in the field with both enterprise and medium sized organisations. During this time Rob has been fortunate to work for many of the biggest names in the industry in a variety of roles in the UK and the US. From application development and support, to direct solution implementations, to product management and marketing, to consulting management and technical sales, Rob has gained insight into the ITSM world from a wide variety of angles. This 360 degree view of the market enables Rob to balance real life scenarios, customer requirements, best practice processes and technical solution capabilities and limitations to give a unique pragmatic approach to improving IT services using a combination of current best practice and tried and tested experience.*

Disclaimer

- The content of this presentation does not necessarily represent the position of my employer. Nor does it represent any intent upon their part to deliver products and services to meet the objectives and requirements covered. Any product references or comparisons are not intended to show a preference and should in no way be taken as a recommendation or otherwise

What we will cover…

- Service Quality – Some definitions
- The current state of the art…
- Limitations with current measures
- The components of service quality
- Selecting the right components for a specific service
- Management dashboards and metrics

What do we mean by "Service"?

"A service can be thought of as the persistent availability of a delivery capability which may be leveraged via transactional exchanges or subscription that may or may not result in physical deliverables and/or tangible and intangible benefits to the entity utilising the service."

What do we mean by Quality?

Quality is not a relative measure of goodness. Any such definition is pointless as it does nothing to help us to understand how it is that we are to deliver what our customers expect and require.

Quality must be defined simply and unambiguously as **"Conformance to requirements"** if we are to ever improve our delivery capability and consistently satisfy and delight our customers

Current IT service definitions are often useless to describe service quality

- Lack of defined requirements
- Contradictory requirements
- Unquantifiable and immeasurable requirements
- Little or no understanding of service use cases

The traditional components of service quality
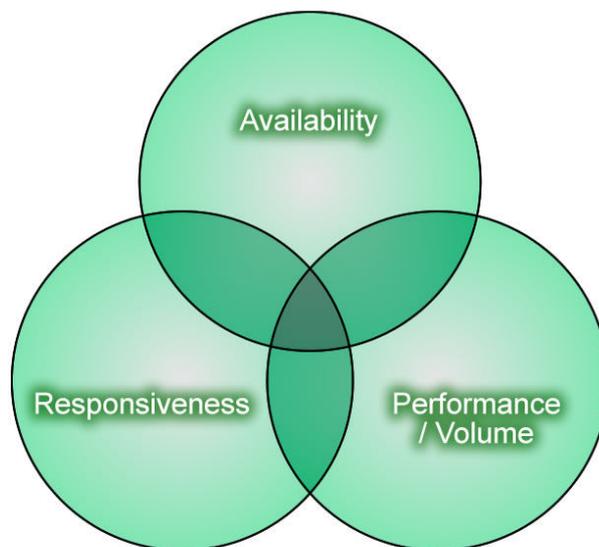
Limitations of traditional measures

- Disconnect between the users and IT over what service quality means
- Metrics don't cover every aspect of the delivery of a service
- "Good" service can still cause customer dissatisfaction
- Customer satisfaction is usually measured after the fact and is largely left to chance

Determining service quality is non-trivial i.e. it's bloody hard!

So, what is the way forward?

Possible components of "real" service quality

- Availability
- Responsiveness
- Throughput / Performance
- Accuracy
- Consistency
- Resilience
- Value
- Simplicity

- Expectation
- Efficiency
- Deliverable compliance
- Request latency
- Frequency of failure
- Level of disruption
- Problem duration

Availability

- Is it there when I need it?

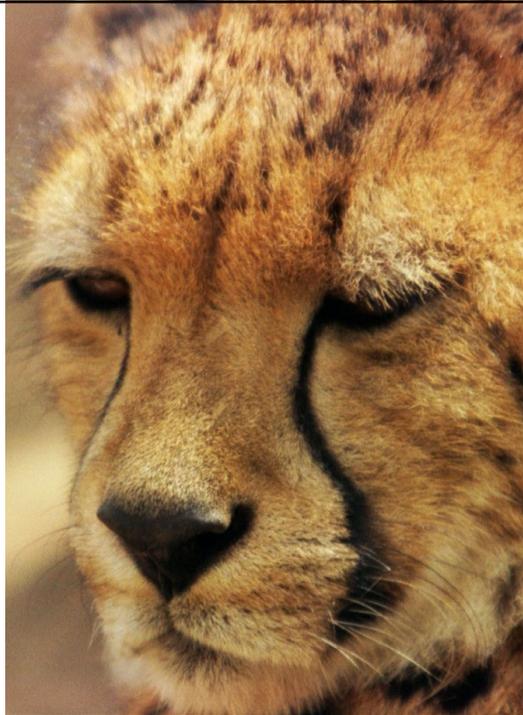If a tree falls in the woods and no-one is there to hear it, does it make any noise?
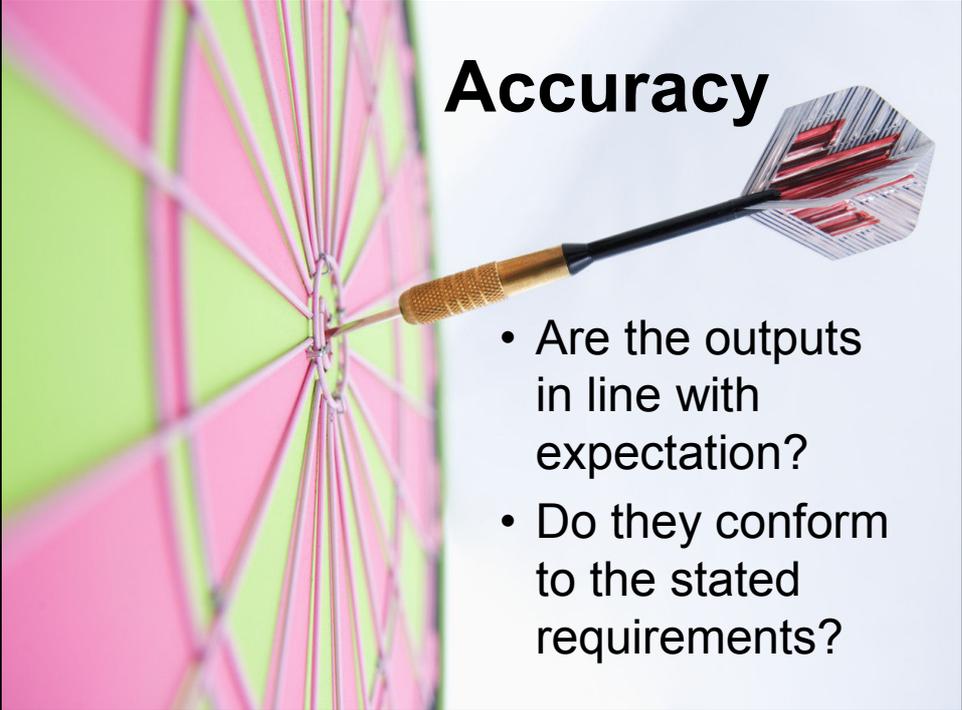
Responsiveness

- Does it react to my inputs in a timely fashion?

Throughput / Performance

- Does it perform as required?
- Is the trans-actional volume within tolerance?

Accuracy

- Are the outputs in line with expectation?
- Do they conform to the stated requirements?

Consistency

- Do all service users have a comparable experience?

Flexibility

- Can the service accommodate various request profiles simultaneously?
- Does the service adapt to changing user requirements?
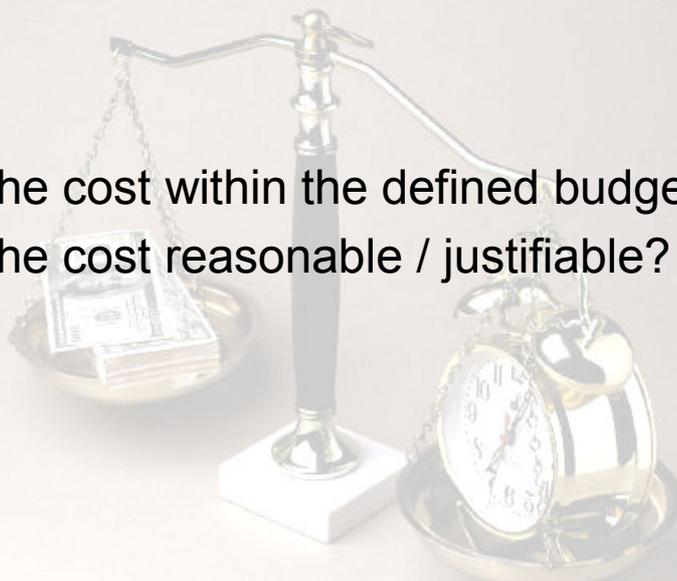
Resilience

- Can it handle the unforeseen?

Reliability

Value

- Is the cost within the defined budget?
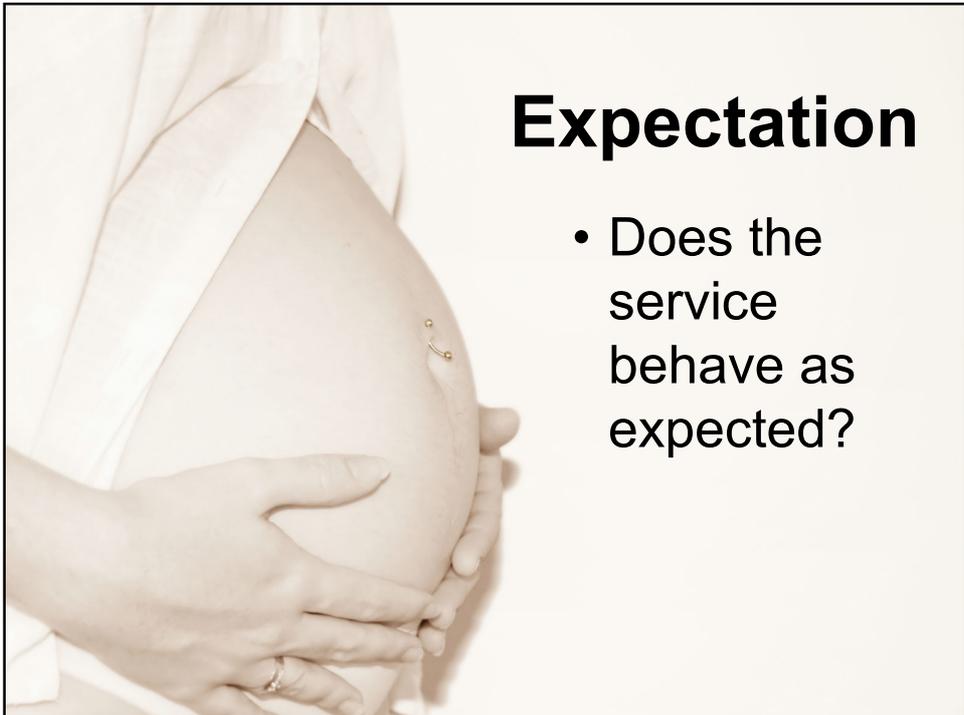- Is the cost reasonable / justifiable?

Simplicity

- Is the service readily accessible and easy to use?

Expectation

- Does the service behave as expected?

Deliverable Compliance

- Do we get what we should?

Efficiency

- Is the service delivered with a minimum of interactions etc?

Request Latency

- What is the lead time for service delivery based upon current capacity and back log?

Frequency of failure

- How often does the service cause problems?
- And what are the effects of these problems?

Level of disruption

- How much hassle do service issues and/or failures cause?

Problem Duration

- When there is a problem, how long does it affect me for?

Recap: Possible components of real service quality

- Availability
- Responsiveness
- Throughput / Performance
- Accuracy
- Consistency
- Resilience
- Value
- Simplicity

- Expectation
- Efficiency
- Deliverable compliance
- Request latency
- Frequency of failure
- Level of disruption
- Problem duration
- And many more…
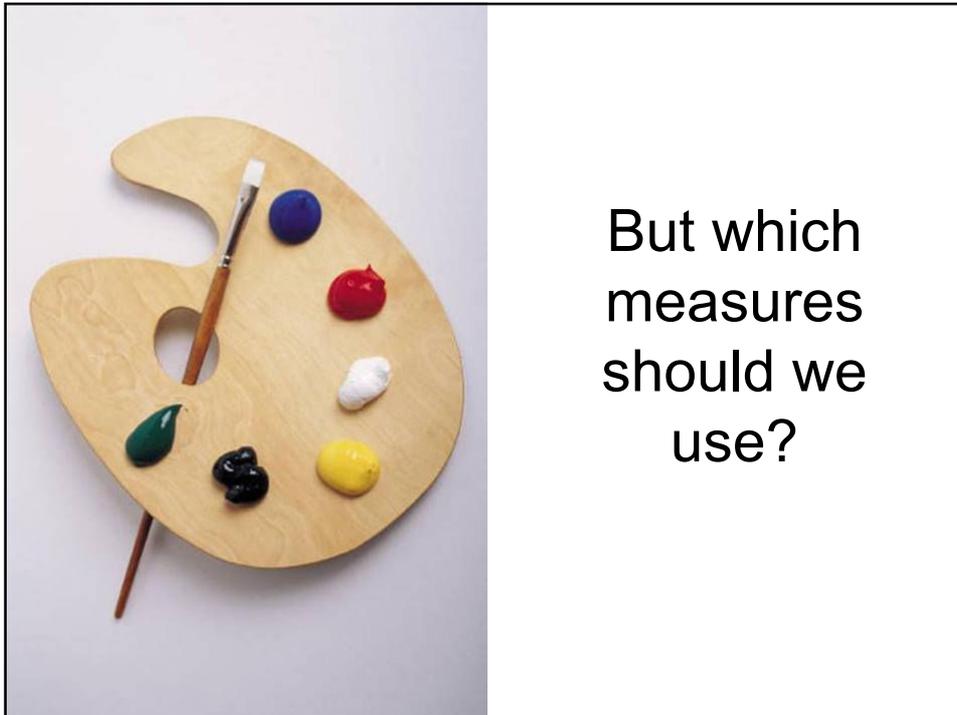
But which measures should we use?

You must walk in the foot steps of your customer…
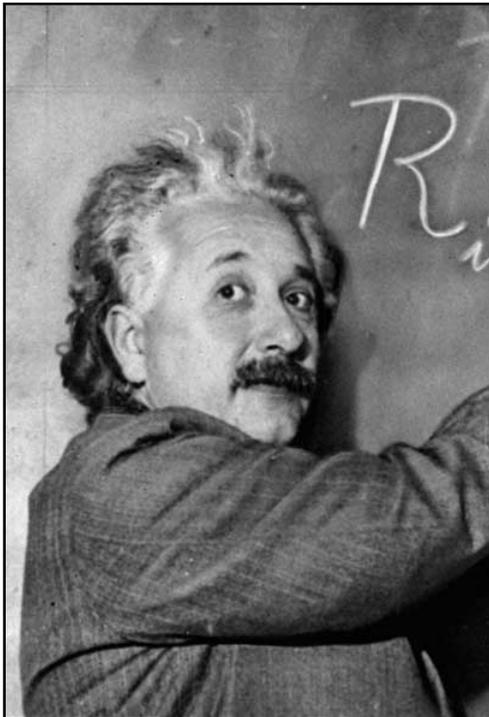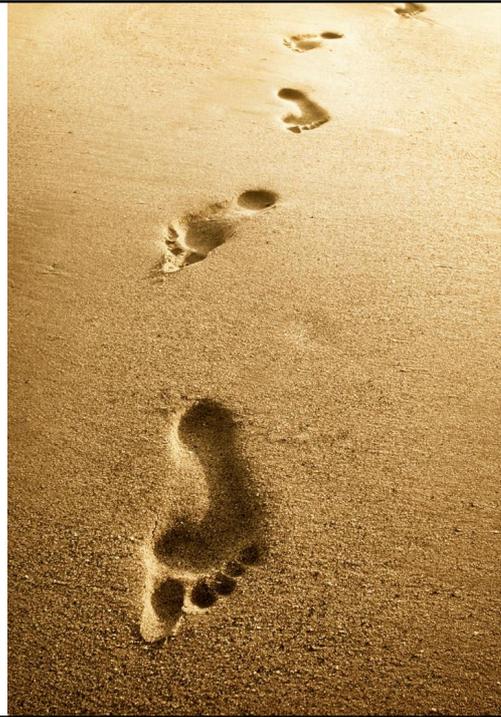
"Not everything that counts can be counted, and not everything that can be counted counts"

Knowing what to measure is the easy, well easier, part… (ish)

- Data collection
- Data levelling
- Data analysis
- Data consolidation
- Data presentation

The service quality dashboard

The service quality dashboard

"Most of the information that a manager will need to run a business will reside on a computer screen in a 'digital cockpit'. It will contain every piece of real-time data, with automatic alerts spotlighting the trends requiring immediate attention."

Jack Welch
Former CEO of GE

Reality is somewhat trickier… Not so much green, amber or red - more of a sludgy muddy brown colour!

A roll-up of roll-ups

- Although to be fair you would need to be on the wacky baccy to think that such a thing was easy to deliver…

Creating a service quality index

- Comparison of multiple metrics with differing units of measure (an "n" dimensional multi faceted matrix)
- Application of suitable weighting criteria
- Testing the result for corner cases and extreme values

- Remember that it is <u>NOTHING</u> more than an indicator based upon predefined rules

A "simple" service quality formula?

$$6y'' + 33y = 0 \qquad y(0) = 8; \quad y'(0) = 5$$

$$6r^2 + 33 = 0$$

$$y(t) = c_1 e^t \cos\left(\sqrt{\tfrac{11}{2}}\, t\right) + c_2 e^t \sin\left(\sqrt{\tfrac{11}{2}}\, t\right)$$

$$r^2 = \tfrac{-33}{6}$$

$$8 = y(0) = c_1 \cos\left(\sqrt{\tfrac{11}{2}}\, t\right) + c_2 \sin\left(\sqrt{\tfrac{11}{2}}\, t\right)$$

$$r = \pm i \sqrt{\tfrac{11}{2}}$$

$$y'(t) = c_1 e^t \cos\left(\sqrt{\tfrac{11}{2}}\, t\right)$$

$$\boxed{y(t) = \tfrac{5\sqrt{22}}{11} e^t \sin\left(\sqrt{\tfrac{11}{2}}\right)}$$

$$y = Ae^{ix} + Be^{-ix}$$

$$8 = y(0) = c_1 + 0$$

$$y = Ae^{i\sqrt{\tfrac{11}{2}}x} + Be^{-i\sqrt{\tfrac{11}{2}}x}$$

$$\boxed{8 = c_1}$$

$$y' = i$$

$$\boxed{c_2 = \tfrac{5\sqrt{22}}{11}}$$

$$y(t) = c_2 \sin\left(\sqrt{\tfrac{11}{2}}\, t\right)$$

$$\boxed{5 = c_2 \sqrt{\tfrac{11}{2}}}$$

$$y(t) = c_2 e^t \sin\left(\sqrt{\tfrac{11}{2}}\, t\right)$$

$$y'(t) = c_2\left[e^t \sin\left(\sqrt{\tfrac{11}{2}}\, t\right)\right] + c_2 e^t \cos\left(\sqrt{\tfrac{11}{2}}\, t\right)\sqrt{\tfrac{11}{2}}$$

A formula is not an algorithm…
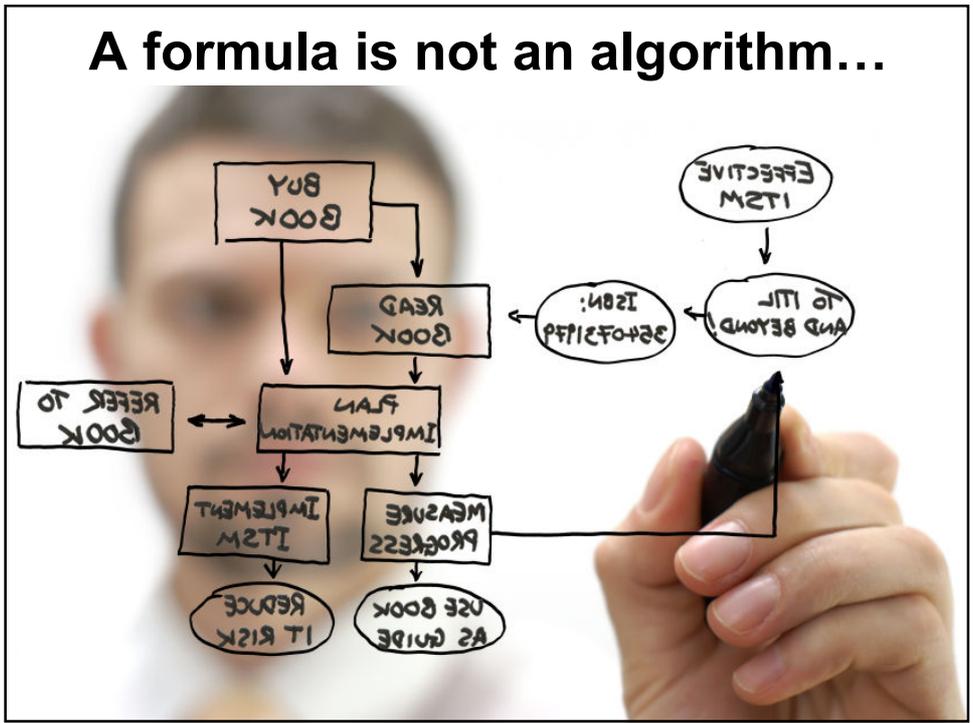
Creating a service quality algorithm

- Identify key contributory factors
- Rank contributory factors by influence
- Define bands of "acceptability" for each metric
- Assign weighting values against bands
- Define metric evaluation sequence
- Identify "opt outs" and "promotion" criteria
- Define iterative process and exits
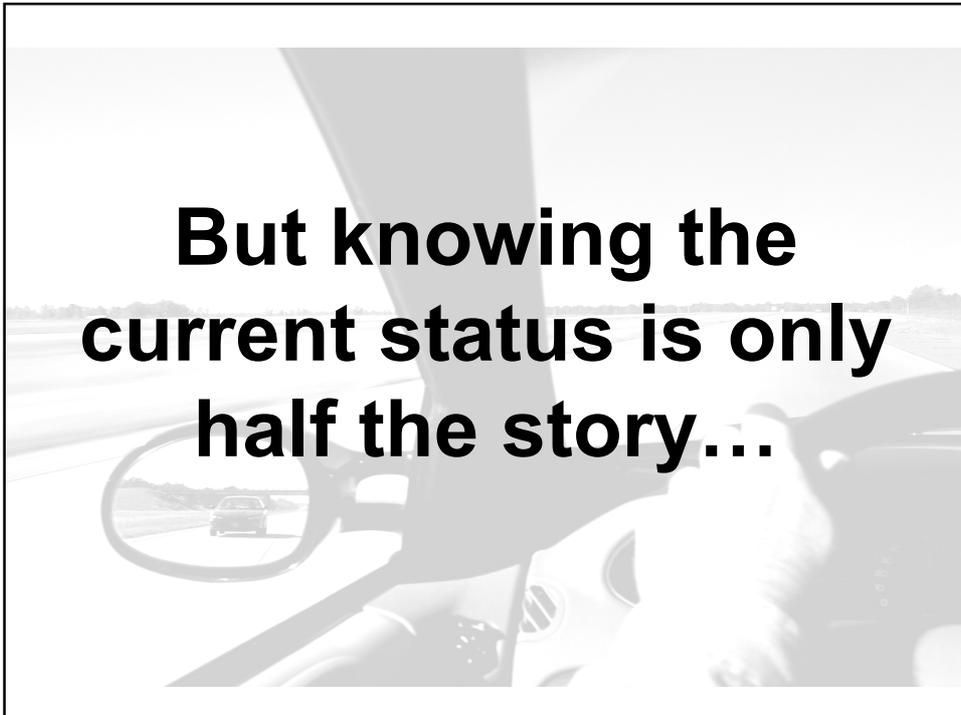- Document and publish how the consolidated metric is derived to ensure visibility, understanding and acceptance
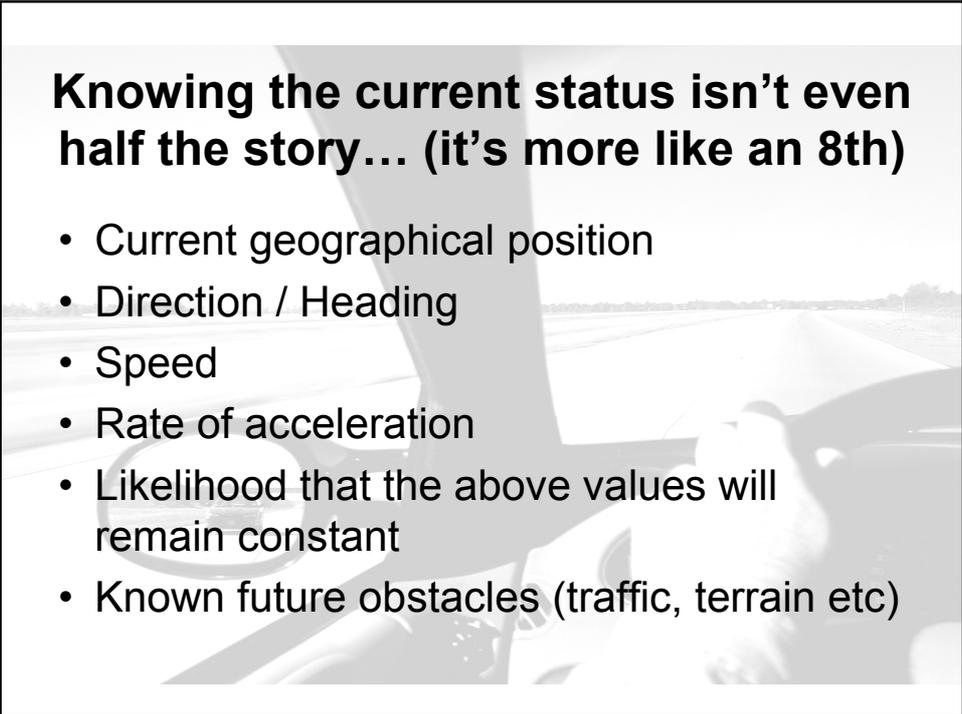
There is no right or wrong way...

So we have a metric on a dashboard…

But knowing the current status is only half the story…

Knowing the current status isn't even half the story… (it's more like an 8th)

- Current geographical position
- Direction / Heading
- Speed
- Rate of acceleration
- Likelihood that the above values will remain constant
- Known future obstacles (traffic, terrain etc)

Not forgetting the risk of someone or something jumping out in front of you
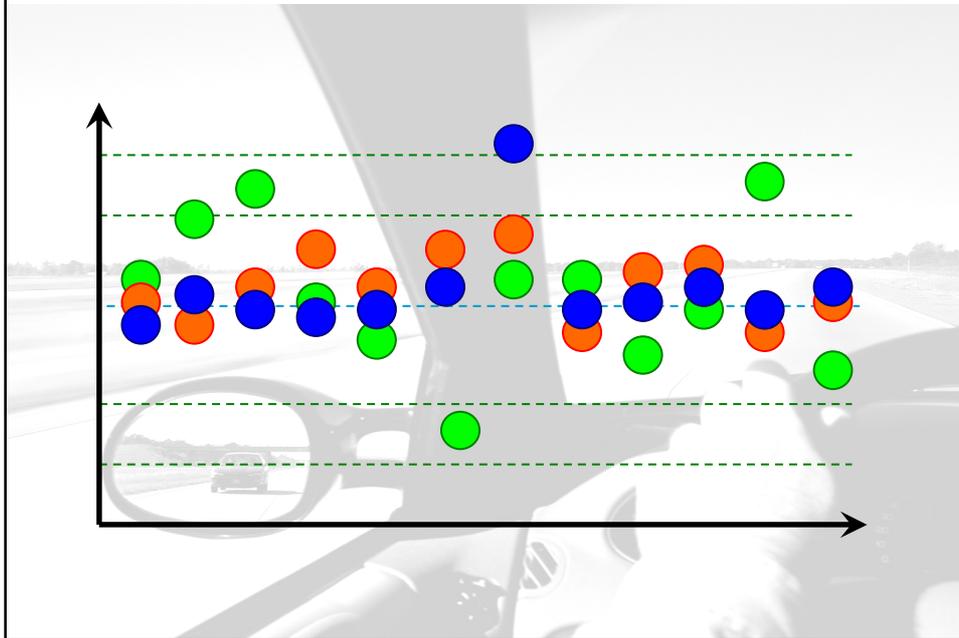
The service quality dashboard (again)

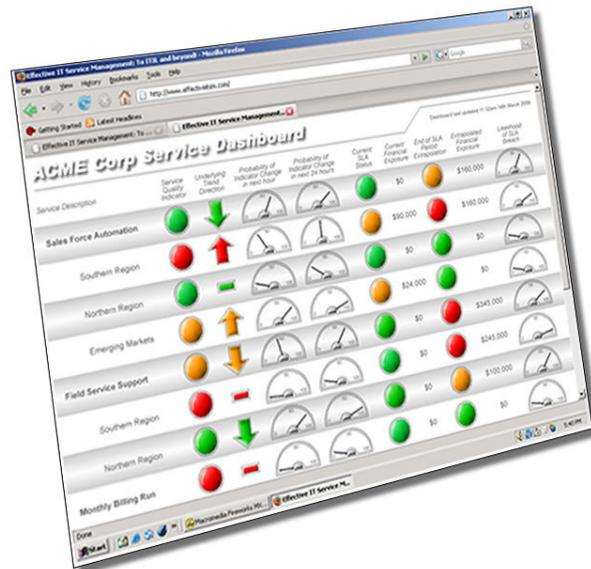## The service quality dashboard (yet again)

- Current dashboards tend to focus on what has happened and the current status in something like real time
- There is seldom any indication as to what may happen in the future
- Predictive capability is not the stuff of science fiction, just the application of statistical process control (SPC) concepts that have been around for decades
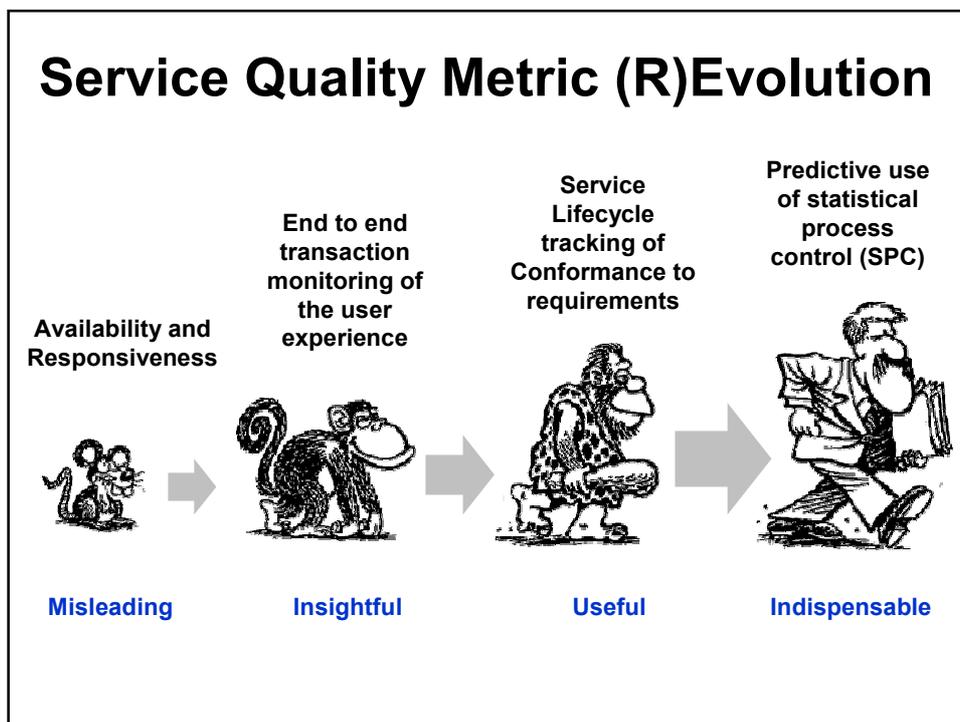
Which service should we worry about?

A possible dashboard…

Please note: This is merely an example of one version of what "could be" that highlights some of the limitations of current dashboards…

Service Quality Metric (R)Evolution

Availability and Responsiveness	**End to end transaction monitoring of the user experience**	**Service Lifecycle tracking of Conformance to requirements**	**Predictive use of statistical process control (SPC)**
Misleading	**Insightful**	**Useful**	**Indispensable**

What we covered… (I hope)

- Service Quality – Some definitions
- The current state of the art…
- Limitations with current measures
- Some of the components of service quality
- Selecting the right components for a specific service
- Management dashboards and metrics

A final lesson from the quality management industry…

- Defined acceptable quality levels soon become the normal operational parameters by default. The only acceptable quality level is zero defects.

- Aspiring to anything less is pointless…

Philip B Crosby, Author of "Quality is free" and many other excellent quality management books

Thank You!

Before you go…