The Changing Role of a Quality Engineer

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Vistaprint Make an impression.

About Vistaprint

We empower millions of people worldwide to:
Make a living   Make a connection   Make a difference

- We provide affordable, low-quantity, high-quality customized products for small and micro businesses wanting to make a professional impression with customers

- Offerings include physical and digital products

- We operate as a direct-to-customer marketing channel

- Revenues of over $1B in FY2013 with a typical YoY growth rate of around 20%.

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The world around us is changing…

Information   How it is gathered and used to make decisions

Customer   Need to deliver products and solutions as perceived

Technology disruption Vendor based solutions, integration and customer driven personalization

Embedded functions   Operating together as one team to deliver on-demand – specialization & generalization

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Here's a visual

And a few words

- Smartphones

- Apps

- Experience

- Personal

- Search

- Opinion

- Perception

- …

What is important?

This	Or This?
Product quality	Customer perceived quality
Improving quality over time	Getting it right the first time
Defect and incident management	Customer relationship management
In-process metrics	Making decisions
Structured growth	Disruptive growth

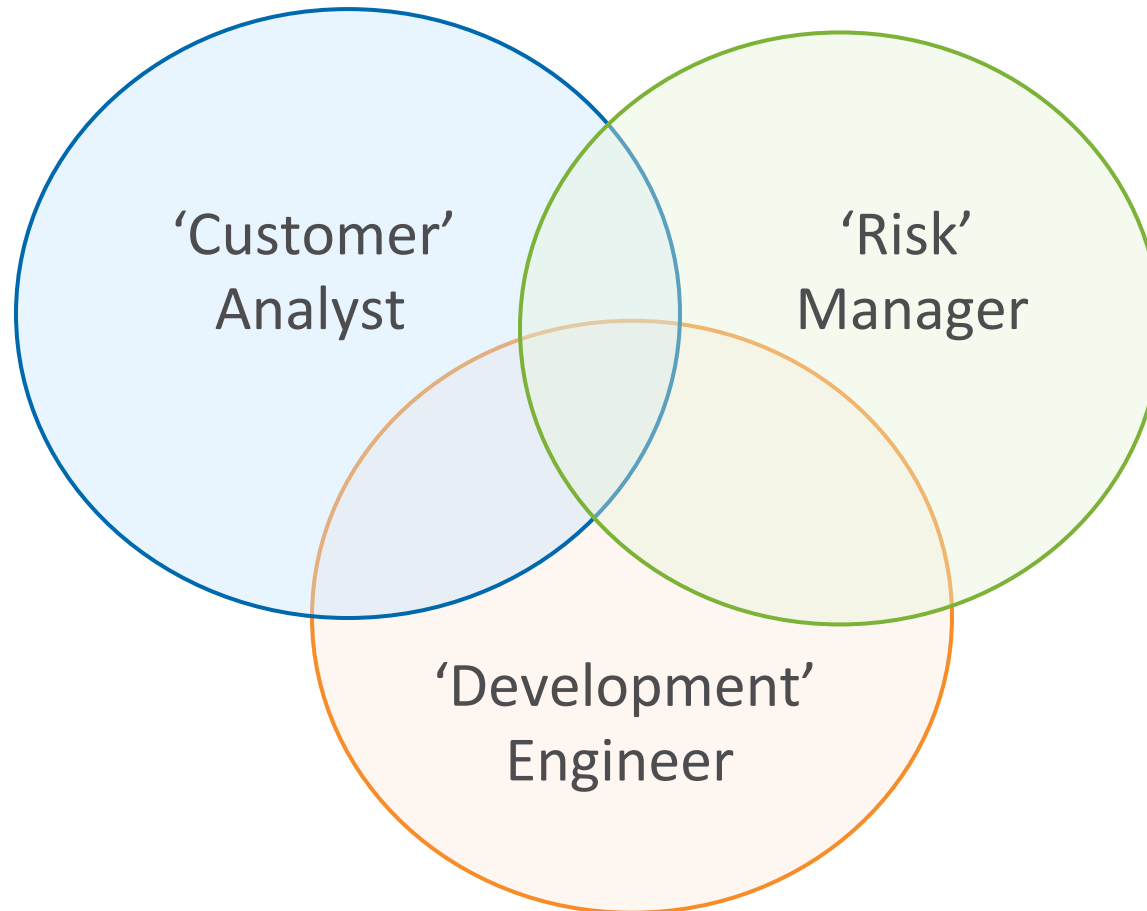Tooling / Analytics ----------> People / Expertise

Critical Disruptors / Enablers

- Marketplace - Who is negotiating the contract?
    - o Crowdsourcing
    - o Managed Services

- Consumerization of IT – Who ensures quality here?
    - o Cloud Offerings
    - o Vendor to Business

- Technology evolution and obsolescence – What type of skills matter?

- De-centralization and integrated (business-led) teams – What does a QE engineer do?
    - o Guilds (Slant towards generalization)
    - o Agile Practices (Efficient delivery over planning, acceptance over regression)

- Continuous Integration / Deployment / Delivery – Is continuous testing possible?

- …

Changing Role of Quality Engineer

Quality Function Evolution

Separate Quality Function

Embedded Quality Function

Quality Distributed in Organization

QA Analyst

Business Analyst

Customer Analyst

Risk Manager

?

Automation Engineer

Development Engineer

Now

Short to Medium-Term

Long-Term
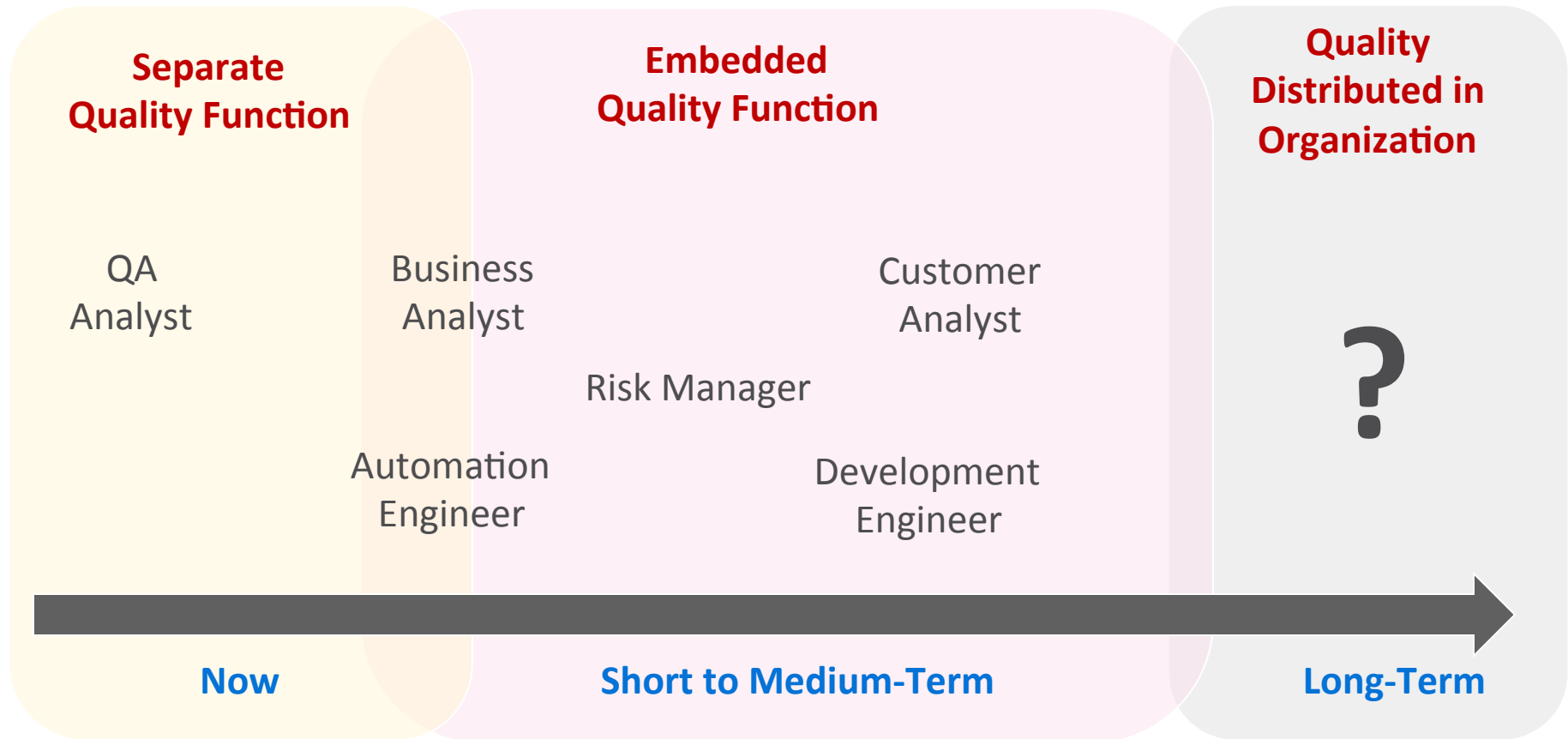
Path of Evolution for Quality Engineer

From	To
QA Analyst / Business Analyst	Customer Analyst
Process and Metrics-oriented Recommender	Risk-based Decision-maker
Development Partner	Developer

What is valued? Why?

Examples… counterpoints…

Behaviors / Characteristics
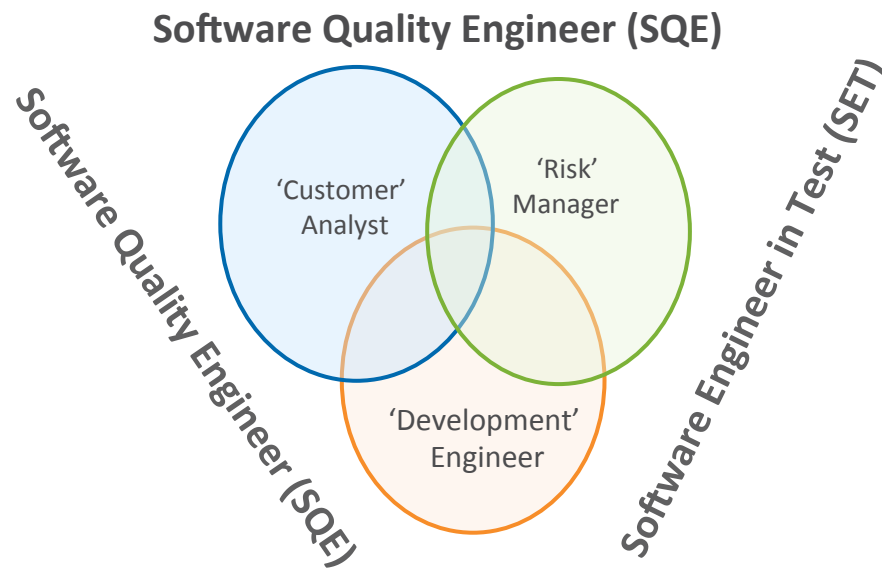
+ Take on a persona

+ Be exploratory

+ Take risks

+ Actively collaborate / network

+ Coach / Mentor

+ Be a change agent

- Structured

- Risk Averse

- 'Leaning' on Process

- Aligned

…

Case Illustration - Conditions Influencing our QE Function

Drivers	Need	Changes...
Time to Market: Deliver when the business needs it	Test faster and smarter without affecting effectiveness	Flexible release options Continuous Delivery 'On Demand' Environments
Product Quality: Find defects early	Test 'always' and fix 'often'	Continuous Integration 'Triage and fix' over 'Test Planning' 'Reduced to No'...Test Week
Overall Quality: Represent the customer	QE as the Voice of the Customer & Business	Emergence of QE 'Customer' Analyst Exploratory manual testing More Crowdsourcing
Technology Capability: Change to our entire software platform – the move to Services and Packages	Systems thinking and the ability to test at the 'code and design' level	Emergence of 'coding' tester TDD and 'sharing' tests Automated Acceptance at every test level

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Summary of Changes

Software Quality Engineer (SQE)

(Venn diagram)

Software Quality Engineer (SQE)

Software Engineer in Test (SET)

'Customer' Analyst

'Risk' Manager

'Development' Engineer

Key Changes

- Moving from centralized to hybrid automation function
- Functional QE part of integrated business and development teams
- SET role mapped to development competency track
- Updated competency track for SQE role
- Risk-based approach to managing time and effort dedicated to quality
- BDD to connect desired behavior to technology development
- Automated acceptance testing to support CI and independent package deployments
- Supported by central teams and technology to enable efficiency and effective decision-making

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Value Notions

- Anecdotal
    - Know your customer
    - Integrated roadmaps / strategy
    - Robust design and development
    - Monitoring and testability

- Quantitative
    - Faster 'triage and fix' rates
    - Increased rate of delivered features every cycle
    - Decrease in customer-reported defects linked to behavior
    - Increased customer satisfaction scores / NPS

Thank You

Q & A