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ROOT CAUSE ANALYSIS

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Topics to be covered

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- What is RCA?
- Why now?
- IIA guidance
- Some key tools / examples
- References / Further training

What is RCA ~ straight-forward approach

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Surface view / symptoms

Below the surface/ root

Practice Advisory
2320-2: Root Cause Analysis

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1. Root cause analysis is defined as the identification of why an issue occurred (versus only identifying or reporting on the issue itself). In this context, an issue is defined as a problem, error, instance of noncompliance, or missed opportunity.

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RCA ~ Why now?

Feedback from stakeholders that many audit findings are in the detail and not adding value

IA teams sense that core issues are not being addressed ~ “Groundhog day”

Why now? IIA on “Insights”

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	Executives		
	Expect	Experience	Gap
Root Cause and Action Plan	92%	61%	32%
Judgment in Reporting	95%	61%	35%
Risk Themes	95%	64%	32%
Management Risk Summary	88%	62%	26%
Unmitigated Risk Viewpoint	89%	55%	34%
Executive Performance Feedback	64%	30%	33%

What does the IIA say about RCA?
IIA Practice Advisory: 2320-2

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Auditors whose reporting only recommends that management fix the issue — and not the underlying reason that caused the issue — are failing to add insights that improve the longer-term effectiveness and efficiency of business processes and thus, the overall governance, risk, and control environment. A core competency necessary for delivering insights is the ability to identify the need for root cause analysis and, as appropriate, actually facilitate, review, and/or conduct a root cause(s) analysis.

Some Root cause Analysis tools

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5 Whys ~ Honda / Toyota

Lean six sigma CTQ

Accountabilities: RASCI / RACI

Pareto ~ 80/20: Key risks and key controls

Data analytics

Best practice frameworks / use of a working hypothesis

5 Whys ~ Toyota/Honda

5 Whys ~ Toyota/Honda

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Taiichi Ohno: "the basis of Toyota's scientific approach, by repeating why five times, the nature of the problem as well as its solution becomes clear."

Example ~ Challenger shuttle disaster..

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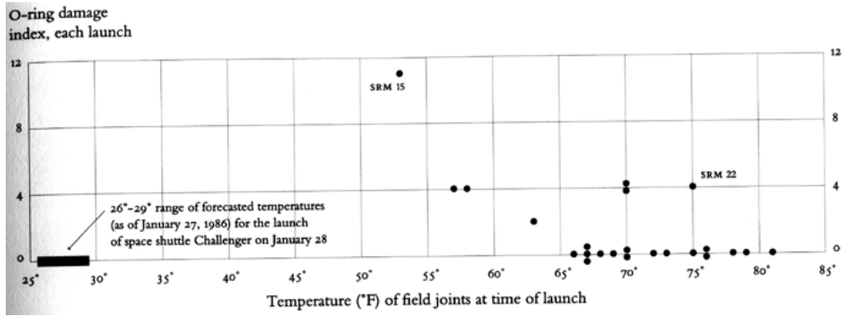
WHY?
O-rings failed, resulting in gas explosion

Example ~ Challenger shuttle disaster..

WHY?
It was cold, engineers did not have data for this temperature



Example ~ Challenger shuttle disaster..

WHY
Needed to launch without delay to satisfy stakeholders

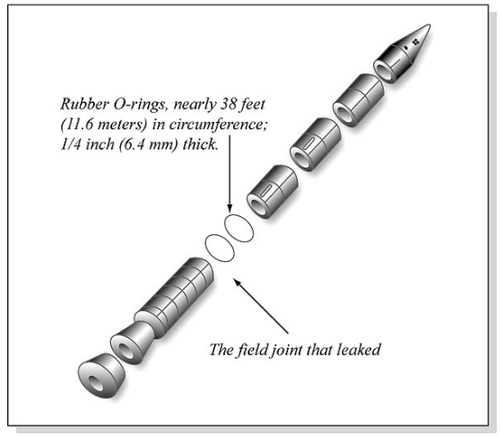
WHY
Stakeholders had been promised to justify costs of programme

WHY
Programme approval was a political process, senators needed to be on board

Example ~ Challenger shuttle disaster..

FURTHER INSIGHTS

Rocket boosters built in several locations
to gain political support



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Critical to quality

Lean six sigma ~ Critical To Quality

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The key characteristics of a product or process whose performance standards or specification limits must be met in order to satisfy the customer.

They align improvement or design efforts with customer requirements.

Aim to specify measures

Accountabilities

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Accountabilities: Success

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Accountabilities Failure

McKinsey ~ RASCI/ RACI etc. (Accountability mapping tool)

- Accountable (Head on the block) ~ CFO
- Responsible (Deliver) ~ Head of Purchasing
- Consult (on new project) ~ Managers
- Inform (on outcome) ~ Staff

- Does your organisation have a robust approach to Accountabilities?
- Is the RACI or other tools in use?
- Is this a cultural strength or weakness?

Pareto principle

Pareto principle – 80/20

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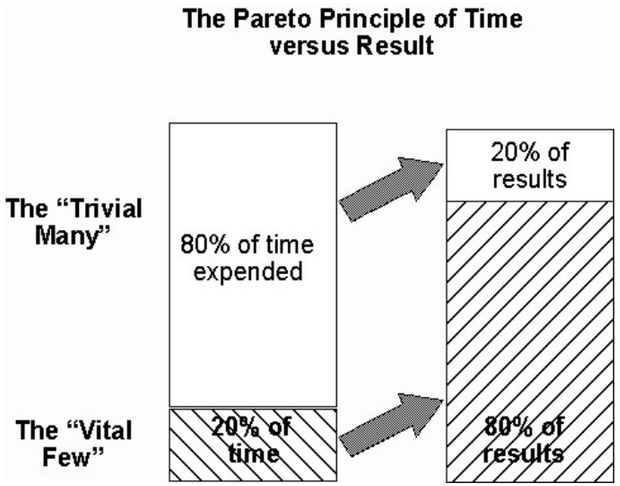

Pareto principle ~ Website

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Broken Link	Spelling error	Missing object	Script error	Config A			
30	25	15	10	8	5		
30	55	60	70	78	83	88	93

Pareto principle ~ Website

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Broken Link	Spelling error	Missing object	Script error	Config A			
30	25	15	10	8	5		
30	55	60	70	78	83	88	93

Key risks & key controls

When considering assurance / when auditing

What is a key risk?

What is a key control?

Auditing: Pareto approach

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Risks	Key control A	Key control B	Key control C	Other control	Other control
Key risk 1					
Key risk 2					
KR3					
OR					
OR					

Sometimes: IA coverage

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Risks	Key control A	Key control B	Key control C	Other control	Other control
Key risk 1					
Key risk 2					
KR3					
OR					
OR					

Common problem in IA
Sometimes depth is this..

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Risks	Key control A	Key control B	Key control C	Other control	Other control
Key risk 1					
Key risk 2					
KR3					
OR					
OR					

Audit Committee / Management thinks

Risks	Key control A	Key control B	Key control C	Other control	Other control
Key risk 1					
Key risk 2					
KR3					
OR					
OR					

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Key risks and key controls

- Are assignment plans clear on what will / wont be covered?
- Ensuring stakeholders don’t get misled
- Training staff to keep on track
- Paying attention to:
    - Materiality of the issue
    - Control effectiveness
- Keep focus on the key areas that matter the most

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Use of best practice frameworks

Elements of an effective compliance programme

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Area	Staff	Manager	Other
Culture / Oversight			
Objectives / R&Rs			
Risk and mitigations			
Policies			
Develop processes, standards & training			
Implement standards & controls			
Monitoring			
Incident management & corrective action			
Auditing			

Case study

Case study ~ “Audit findings”

1) Admin user rights granted to project staff (approx. 30 individuals) incl. the IT Manager’s workstation.

2) Windows updates applied to workstations manually by IT only when information about important updates is received from IS in HQ – last update on Windows XP was Service Pack 3 in June 2010 (Group IS standards recommend minimum monthly updates).

3) Monthly backups should be stored off-site rather than on-site.

Case study ~ Facts vs. Findings/root cause

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User access

Policy in place? Yes
Why, training not worked?
No special training materials, no record of who has read
Why? No expectation to keep records and no checking of understanding
Why? Unclear about need for records ~ Role of managers to supervise not explicit
Why? Limited rigour around how to ensure policy is complied with
Why? Trust based culture, role of policy function, how training works unclear

Case study ~ Facts vs. Findings/root cause

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Windows up-dates

Why, wasn't a procedure in place? It was

So, why non compliance? Manager reports reliance on occasional IT up-dates from the centre

Why? Didn't he know he was supposed to review monthly? Not really, importance of this requirement less clear, not emphasised in training

Why? Lots of other work to do, no clear sense of where up-dates on new software requirements would come from centre?

Why? Procedure was too high level and training for this not specific enough

Why? Expectation that if summary procedure issued, it would be read / followed

Why? Belief that line management would ensure this was happening; culture of trust

Why? Policy function not set up to provide more detailed guidance or monitor understanding

Case study ~ Facts vs. Findings/root cause

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Back-ups off site

Why, wasn't a procedure in place? It was

So why? Considered locally a while ago, would have been costly / impractical so left as is

Why? Manager felt they had the right to make this decision, not clear there would be funding for this by local management

Why? Believed this was not so important a risk, felt this was a pragmatic option

Why? Felt they didn't need to consult anyone else

Why? Not clear what they would do if there was a cost/practical issue?

Why? Procedure not clear enough about initial decision and what to do when inheriting an earlier decision

Why? Trust based policy culture, too high level

Case study ~ Findings & Root causes

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Accountabilities between line management and the IS function are not clear enough in relation to policy compliance / training / guidance / follow-up and monitoring, resulting in:

a) Admin user rights granted to project staff

b) Windows updates last update in June 2010

c) Monthly backups should be stored off-site rather than on-site

(This is / may be an issue with other policy functions)

Examples of typical root causes

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a. Competence of personnel
b. Hiring qualified personnel
c. Lack of or insufficient training
d. Adequacy of technology or tools
e. Appropriateness of organization or departmental culture
f. Health of organization or departmental morale
g. Level or number of resources (i.e., budget or personnel)
h. Process circumstances and other influencing items that led the person or persons to make the decisions
i. Decision-making authority of the person or persons involved

Concluding remarks

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Observations

Look beyond the facts

RCA will normally reduce the number of findings / focus more important points ~ Do this before the draft report is written

Is your current audit methodology making this real enough to the team?

Use whatever tool seems appropriate

Recap and other root cause tools

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5 Whys ~ Honda / Toyota

Lean six sigma CTQ

Accountabilities: RASCI / RACI

Pareto ~ 80/20: Key risks and key controls

Best practice frameworks / use of a working hypothesis

Others: Data analytics; Lean SIPOC; Fishbone / Ishikawa diagrams

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Other points from the RCA Practice Advisory

Team up-skilling may be needed
~ RCA training / Lean etc. tools

Time on RCA proportional to importance

Things will get “interesting”

RCA: Longer-term

RCA is a core part of the IA role

Many key stakeholders will want it

Will support streamlining of reports

Will help you avoid groundhog day

References

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https://na.theiia.org/news/Pages/New-IPPF-Practice-Advisory-Released-Root-Cause-Analysis.aspx

www.theiia.org/download.cfm?file=84028

www.riskai.co.uk

J Paterson: Publications / Citations

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Topic	Publication	Month / Year
Internal Audit ~ New rock and roll	Accountancy Magazine, UK	January 2005
Forbidden Territory (auditing no go areas)	IA & BR UK	December 2006
Meeting the people challenge	IA & BR UK	February 2007
Garbage in, garbage out	Internal Auditor	June 2007
The power of priorisation	Audit Director Roundtable	December 2007
Getting the most from your IA function	ACCA e-bulletin	June 2008
Lighting up your blind spots	IA & BR Magazine UK	March 2010
Mixed Messages	Strategic Risk Magazine	March 2010

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Topic	Publication	Month / Year
Know your business	Internal Auditor, US	June 2010
Help or hindrance?	Risk Management Professional	June 2010
A problem shared (Action Learning)	IA & BR Magazine UK	June 2010
Culture & behavior	IA & BR Magazine	March 2011
Assurance Mapping	CFO World	March 2011
Assurance Mapping	IA & BR Magazine UK	April 2011
Psychology of risk and audit	ACCA UK e-bulletin	June 2011
Lean Auditing	CIPFA Audit Viewpoint	August 2011
Lean Auditing	Audit & Risk W/S UK	September 2011

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Topic	Publication	Month / Year
HIA career paths	Symmetry	November 2011
Boards and Risk	Risk Management Professional, UK	December 2011
Audit Planning	theiia.org/chapters/500	December 2011
New year new plan	Audit & Risk Magazine, UK	January 2012
Risk assurance and assurance mapping	CIPFA Audit Committee up-date	February 2012
IA KPIs	IIA Denmark	April 2012
Coordinating assurance	Audit & Risk Magazine, UK	May 2012

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Topic	Publication	Month / Year
Eight things you need to know as a new HIA	www.auditandrisk.org.uk	July 2012
Dear Audit Committee Chair	Linked In ~ CAE sub-group www.riskai.co.uk	September 2012
Lean Auditing	Internal Auditor, US	December 2012
Audit Committee Effectiveness	ACCA IA Newsletter	March 2012 (eta)
Assurance for the Audit Committee	ACCA IA Newsletter	April 2012 (eta)

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