

# Assumption Based Risk Management

Marcellus Brown 5 March 2019

Rayners Lane Consultants Ltd



# Objectives



- To show assumption based risk management methodology as used in organisations
- How this methodology integrated into projects, programmes and the organisation
- Benefits of using this verses “just collecting risks”



# History



- ▶ Why was this developed?
- ▶ Company approach to risks
- ▶ Consistency across an account
- ▶ Consistency across the organisation
- ▶ Corporate global dashboard
  - ▶ Regions
  - ▶ Accounts
  - ▶ Programmes
  - ▶ Projects
- ▶ Quality Standards Implementation ISO9001 and Capability Maturity Model (Now CMMI)

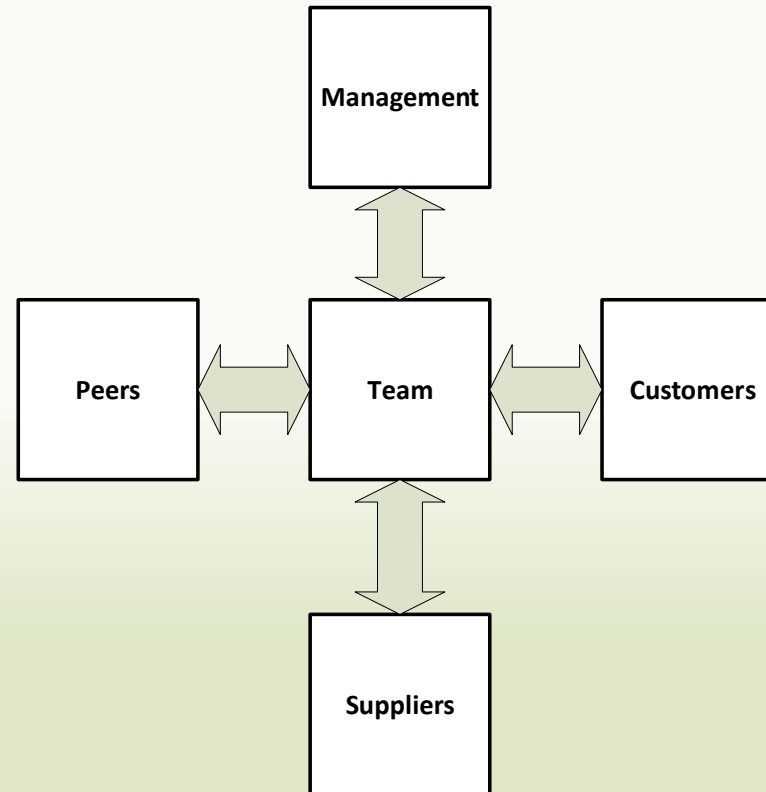


# Maturity CMM (Now CMMI)

- Maturity levels
- Level 0 Incomplete (Heroic)
- Level 1 Performed process      CMMI - Initial
- Level 2 Managed process
- Level 3 Established process      CMMI - Defined
- Level 4 Managed      CMMI – Quantitatively Managed
- Level 5 Optimising

(2014, Sutton, D)


# Stakeholder Overview





# The process – Programme Level

- ▶ BID phase – start collecting issues and assumptions
- ▶ Programme start-up
  - ▶ Set up reporting for projects
  - ▶ Include risk management processes
  - ▶ Programme brief/programme definition – source of information
- ▶ Programme day-to day operation
  - ▶ Oversee risks for all the projects
  - ▶ Maintain programme wide risk processes
  - ▶ Make sure visibility is maintained across the programme
- ▶ Use Programme/Project Management Office (PMO)



# The process – Project Level

- ▶ Project start-up
  - ▶ Set up reporting for project
  - ▶ Include risk management processes – risk management plan
  - ▶ Project brief/Problem Statement– source of information
- ▶ Project day-to day operation
  - ▶ Oversee the risks in the project and associated projects
  - ▶ Maintain project risk processes
  - ▶ Make sure visibility is maintained across the project and shared with programme management
- ▶ Work with PMO



# Overhead



- ▶ Risk management should be in place
  - ▶ It should not turn a project to stone
  - ▶ Reuse of available information
  - ▶ Knowledge sharing
  - ▶ Experience sharing
- ▶ Part of project initiation
- ▶ Part of tracking progress
  - ▶ Waterfall – as part of progress checking
  - ▶ Agile – meetings and end of sprints
  - ▶ Project reporting



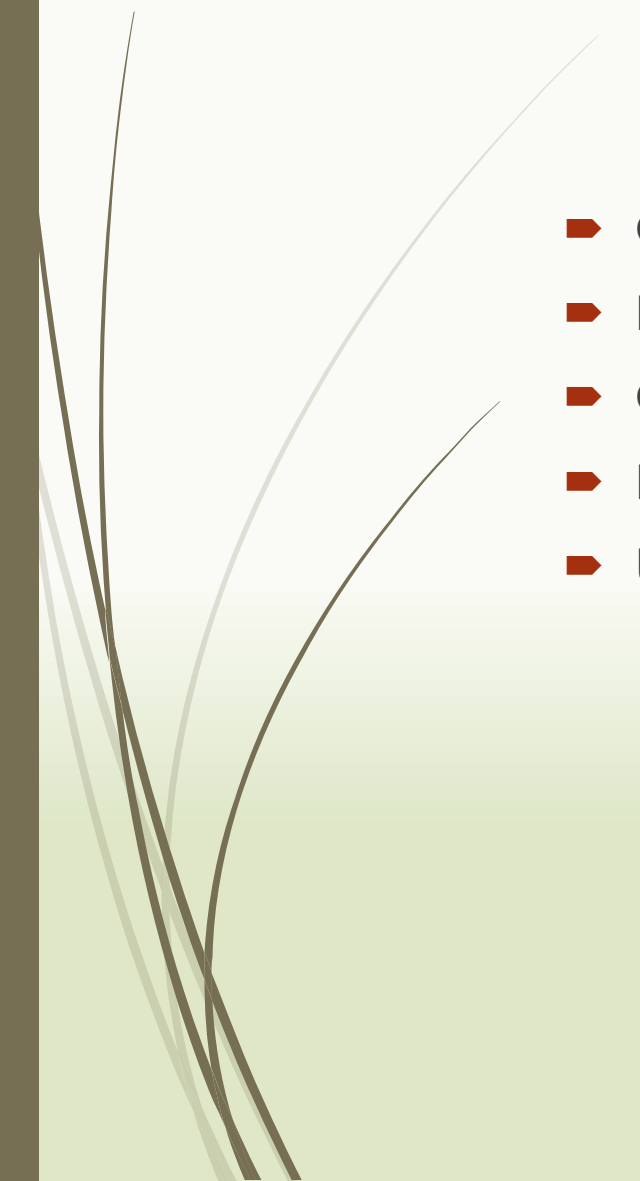


# Techniques in use on the Project

- ▶ Used as part of Programme and Project work
  - ▶ PESTLE
  - ▶ Resource audit
  - ▶ SWOT
  - ▶ Porters Five Forces Framework
  - ▶ Boston Box
  - ▶ Horizon scanning
  - ▶ Probability Impact Grid
  - ▶ Power and Influence Grid (PIG)
  - ▶ Key Performance Indicators (KPI)
  - ▶ Rich picture



# Issues or Concerns

- Collect and document – Spreadsheet / Access
  - Review
  - Criticality
  - Resolution dates
  - Understand the impact(s)
- 



# Issue Record

- Number
- Issue Description
- Size (M\_O\_R)
- Issue timing
- Rating Reason
- Date raised
- Owner
- Actionee
- Keyword
- Associated assumption
- Issue Status
- Date closed

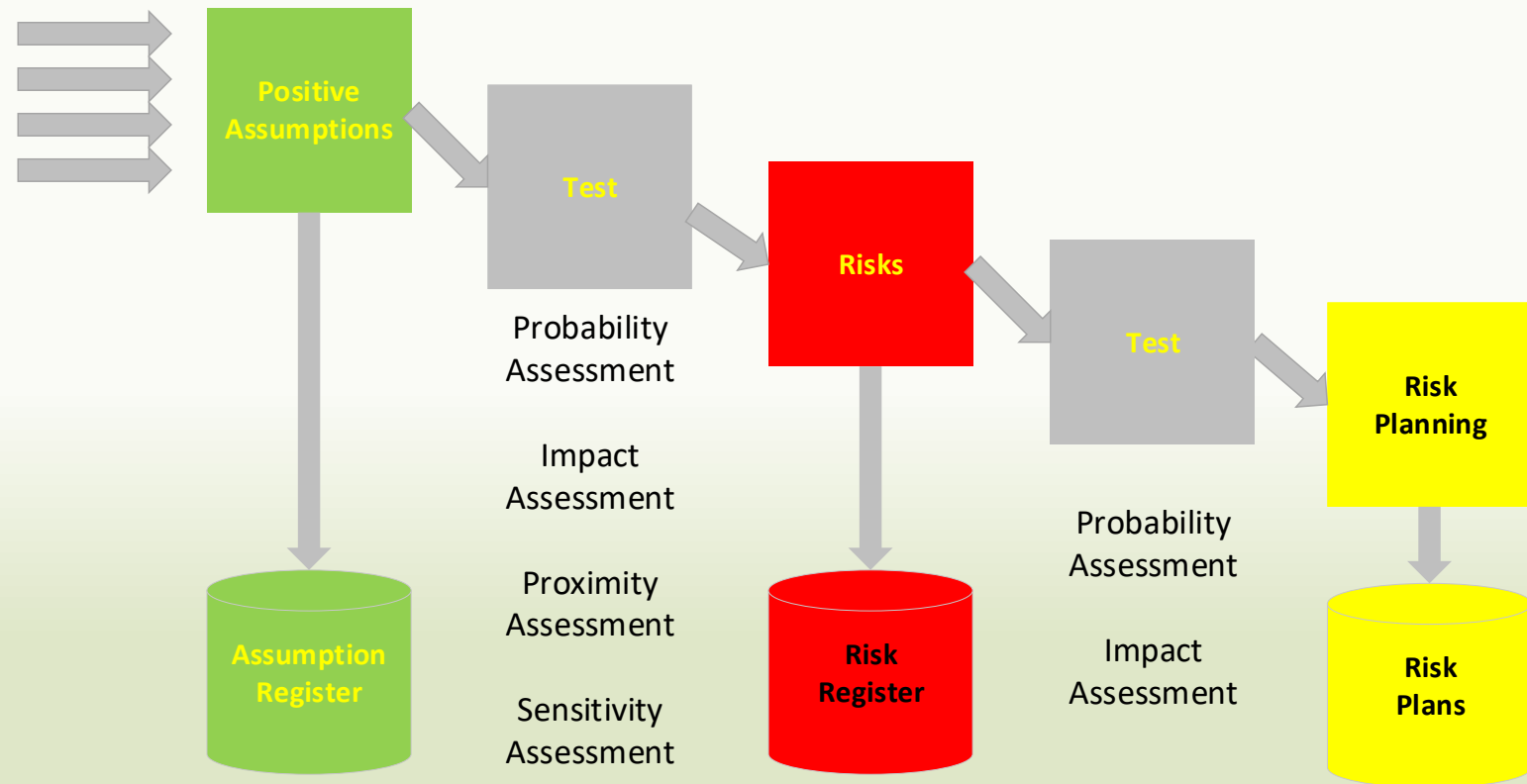


# Planning Horizons



- ▶ Distant Goals
- ▶ Foreseeable future
- ▶ 5 year plan – some vague idea
- ▶ Next year – general understanding
- ▶ 6 months – just starting to focus
- ▶ 1 month – in sight
- ▶ Next week – pretty sure
- ▶ Tomorrow – confident
- ▶ Today - happening

# Process Overview





# Collecting Assumptions

- ▶ Experience gained from previous programmes and projects
  - ▶ Look for experience with similar projects
- ▶ Programme start-up
  - ▶ Collecting issues
  - ▶ Collecting assumptions (facts or purported to be 'Facts')
- ▶ Project start-up
  - ▶ Project brief/Project Initiation Document, problem statement, business case
- ▶ Project execution
  - ▶ Events
  - ▶ Project Tracking/monitoring
  - ▶ Reviews



# Assumptions

- Collect – Spreadsheet / database
- Refine
- Review
- Brainstorm
- Document:
  - Source
  - Criticality
  - Likelihood of holding up over time



# Risks



- Risks – 2 sides
  - Usually perceived as negative
    - E.g. Unforeseen event like “bad code” in system imported into project
  - Can be a situation giving a positive outcome
    - E.g. Supplier releases new software increasing requirements match from 60% to 80%
- Collect know risks from:
  - Experience
  - What are perceived as risks
  - (Including verbal statements)





# Perceived Risks

- ▶ Given each risk determine:
  - ▶ The assumptions, for example:
    - ▶ Key customer says “This invoicing package is risky because it did not work at my last company”
    - ▶ Create an assumption “The selected package will deliver the required functionality”
    - ▶ Tease out more assumptions from the key customer, teams implementing the package and the supplier
  - ▶ Document the source(s)
  - ▶ Understand the perspectives of the stakeholders



# Risks



- ▶ For all the assumptions collected
  - ▶ Review
  - ▶ Remove duplicates
  - ▶ Identify similar assumptions
  - ▶ (maintain)
- ▶ Determine:
  - ▶ Assumptions which are highly likely to be false
  - ▶ Assumptions with high impact
- ▶ Determine if a cascade can occur
- ▶ Determine cross-project dependencies



# Risk Register Record

- Internal/External
- Assumption Statement
- Next Review date
- Actions required
- Owner
- Actionee/Action Manager
- RAG
- Controllability (can the project control this risk/concern)
- Action date
- Date Closed



# Risks



- ▶ Highly likely and high impact risks
  - ▶ Create risk plans
  - ▶ Risk register updated and copied to Project Board (Programme manager)
  - ▶ Review project plans
- ▶ All risks
  - ▶ Look at mitigation
  - ▶ Look at avoidance
  - ▶ Insurance
  - ▶ Transfer
  - ▶ Root causes
- ▶ From M\_o\_R
  - ▶ Probability
  - ▶ Impact
  - ▶ Proximity



# Risk Plans

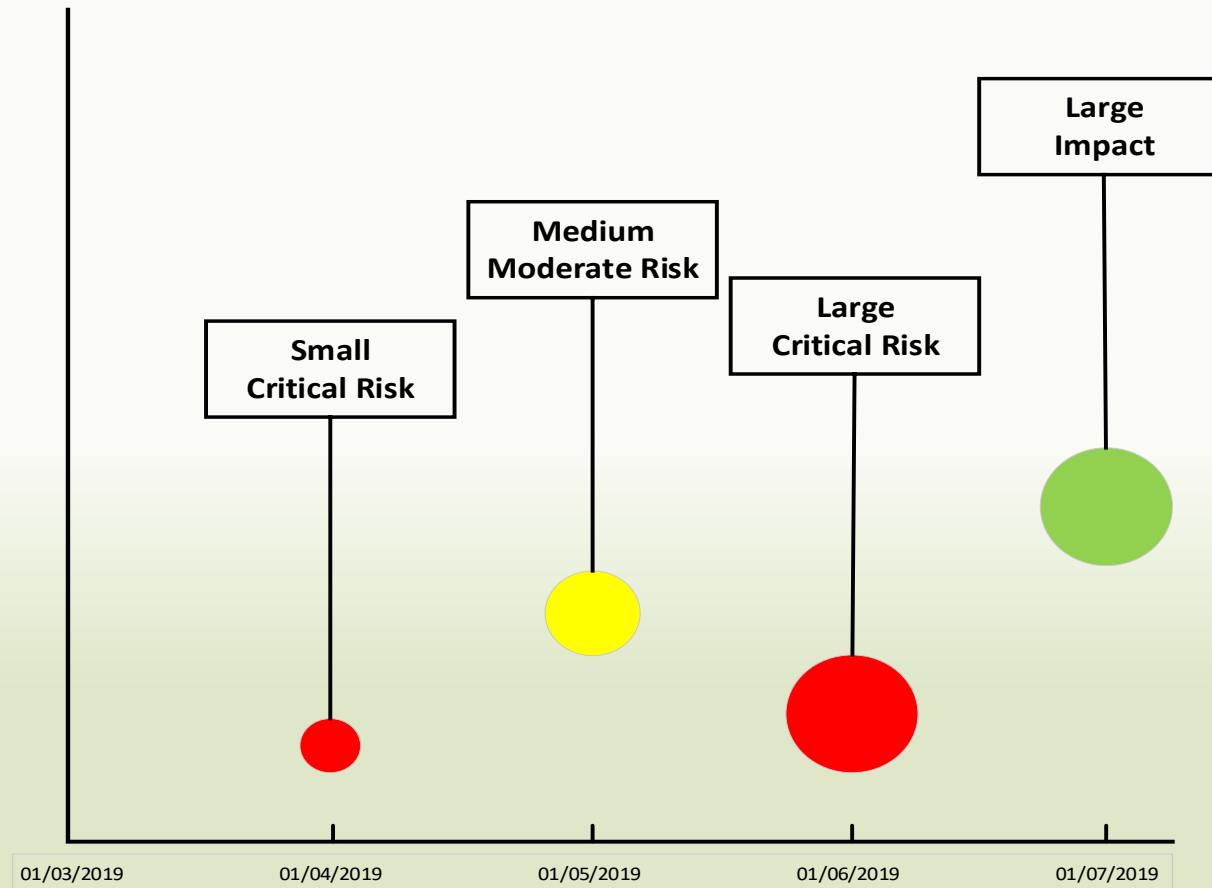
- Only create Risk Plans for high impact likely risks
- Look to merge similar responses
- Keep them safe and controlled
- Remember with all plans they are a guide and may not be 100% accurate. In reality a risk turning into an issue may be different in part or completely from the actual scenario encountered



# Project Management/Risk Tracking

- At initial Start-up, Issues and Assumptions collected and refined as part of project documentation
- Project tracking
  - Verification of task status and deliveries (talking with team members)
  - Discuss with team members status of issues, assumptions and risks
- Update Issues, Assumptions and Risks
- Update the bubble chart in the next slide
- Review with project board
- Review with programme management

# Bubble Chart





# Example – Server Power Down at Weekend

- Assumption – The server will power down and power up ready for business 08:00 Monday morning
- What if this is not true
  - Risk 1 – hardware issue
  - Risk 2 – power supply issue
  - Risk 3 – Software issue with OS or Base software
  - Risk 4 - Application
- Mitigations
  - Hardware support (plan for fix time)
  - OS Software Support
  - Application support
  - Closedown procedure
  - Checklists (not on hardware OOS)
- Plan checkpoints
  - E.g. Hardware normal fix time
  - Software fix time





# Example – Application Upgrade at Weekend

- Assumption

- The application will upgrade to new level for 08:00 Monday morning

- What if this is not true:

- Database backup fail
- Database upgrade fail
- Application upgrade does not work
- Bedding in tests fail

- Mitigations

- Full system backup and restore tested
- Database backup and recovery fully tested
- Full tested in development / acceptance testing
- Abort plan with time window



# Example – Unnecessary Planning

- ▶ Assumption that primary server and backup server must have the same time to a 100<sup>th</sup> of a second.
- ▶ What if this is not true
  - ▶ No problem occurs
- ▶ Effort expended
  - ▶ Hours finding out how to find compatible hardware
  - ▶ 100 hours of meetings
  - ▶ Planning on mitigating non-existent problem




# Example Datacentre – Controller Dropped Ready

- ▶ Assumption is that the data is secure, backed up and always available
- ▶ What happened
  - ▶ All discs on controller had the index corrupted. Data was there but no way to access it
  - ▶ SLA broken
  - ▶ Managers give updates every hour over night! (Asking for trouble)
- ▶ Effects:
  - ▶ Lost customers
  - ▶ Lost data as backups were not sufficient (delegated responsibilities were not taken seriously)
  - ▶ SLAs had financial penalties
  - ▶ Internal problems between data centre and accounts (loss of trust)



# Summary

- ▶ To show assumption based risk management methodology as used in organisations
  - ▶ How this methodology integrated into projects, programmes and the organisation
  - ▶ Benefits of using this verses “just collecting risks”
- 



Any Questions?



# Contact info



- Marcellus Brown
- Email: [marcellus.brown@raynerslaneconsultants.co.uk](mailto:marcellus.brown@raynerslaneconsultants.co.uk)
- Web: [www.raynerslaneconsultants.co.uk](http://www.raynerslaneconsultants.co.uk)
- Mob: 07714 882421



# Reference Material



- ▶ Cadle, James; Paul, Debra; Turner, Paul. Business Analysis Techniques: 99 essential tools for success (Kindle Location 878). BCS Learning & Development Limited. Kindle Edition.
- ▶ Sutton, David. Information Risk Management: A practitioner's guide (Kindle Location 5). BCS Learning & Development Limited. Kindle Edition.
- ▶ TSO 2009, Managing Successful Projects with Prince 2
- ▶ TSO 2010, Management of Risk: Guidance for Practitioners



# PESTLE

- Political influences
- Economic influences
- Sociocultural influences
- Technology issues
- Legal issues
- Environmental issues

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# Resource Audit

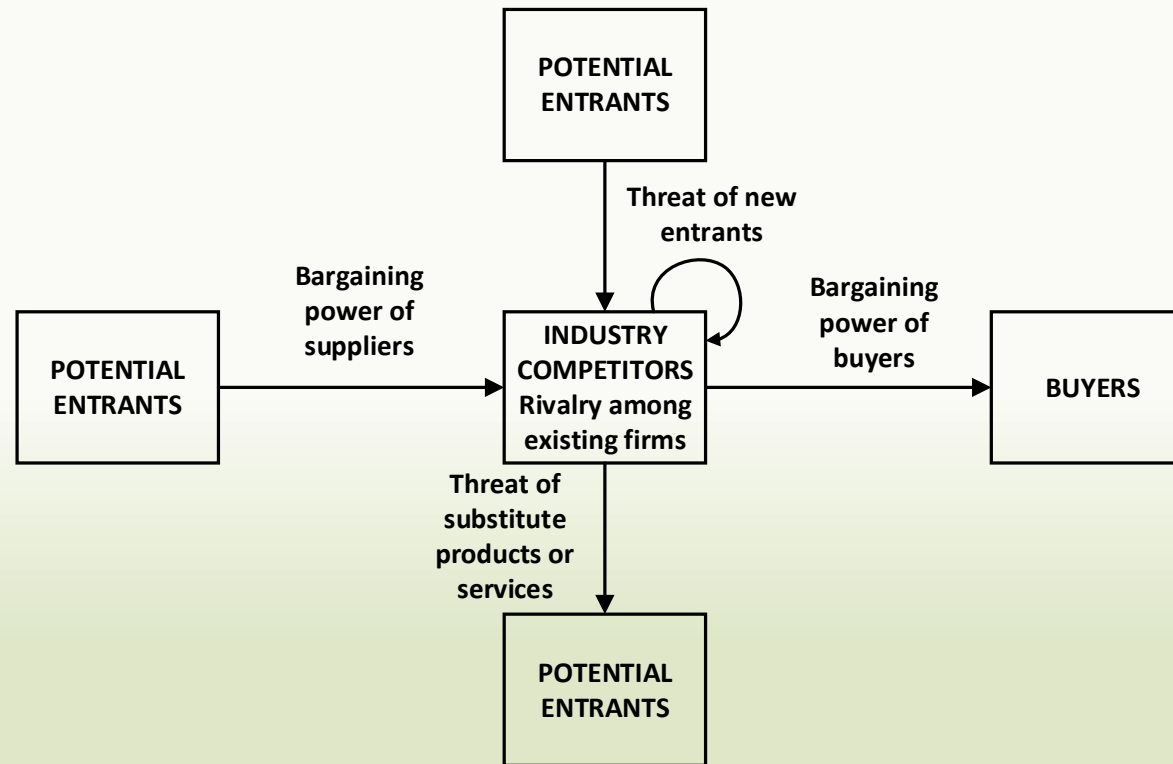
- ▶ Variants/Aliases
  - ▶ Tangible resources
    - ▶ Financial
    - ▶ Physical
  - ▶ Intangible resources
    - ▶ Technology
    - ▶ Reputation
    - ▶ Know-how
    - ▶ Culture
  - ▶ Human resources

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# SWOT Analysis

Internal	<b>Strengths</b> <ul style="list-style-type: none"><li>• Alliance with Supplier 1</li><li>• Alliance with Supplier 2</li><li>• Alliance with Supplier 3</li><li>• E-commerce expertise</li><li>• Good development, implementation and support using agile delivery</li><li>• Content Management System (CMS)</li><li>• Current customer base</li><li>• Determining non-viable business</li><li>• Employee engagement</li><li>• Rapid expansion</li></ul>	<b>Weaknesses</b> <ul style="list-style-type: none"><li>• Vertical Market</li><li>• Small market share</li><li>• Videos on the web (Vimeo, 2014)</li><li>• Only based in one country</li><li>• Only one brand</li></ul>
	<b>External</b>	<b>Opportunities</b> <ul style="list-style-type: none"><li>• Government support for Internet</li><li>• Social Welfare Policies</li><li>• Economy is growing</li><li>• Unemployment is reducing</li><li>• Smartphone usage increasing</li><li>• Mobile device power increasing</li><li>• Green initiatives</li></ul>
	Positive	Negative

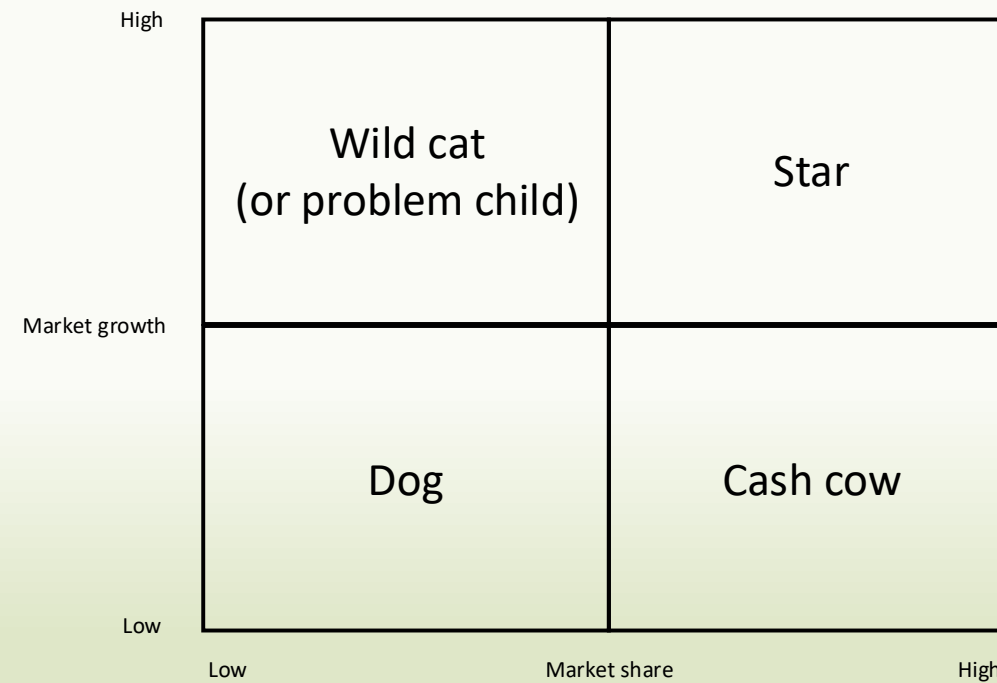
# Porters Five Forces Framework



Cadle, J; Paul, D and Turner, P 2014

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# Boston Box



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# Horizon scanning

- ▶ From M\_o\_R (TSO 2010) “Horizon scanning is the systematic examination of likely future developments that are at the margins of current thinking and planning.”

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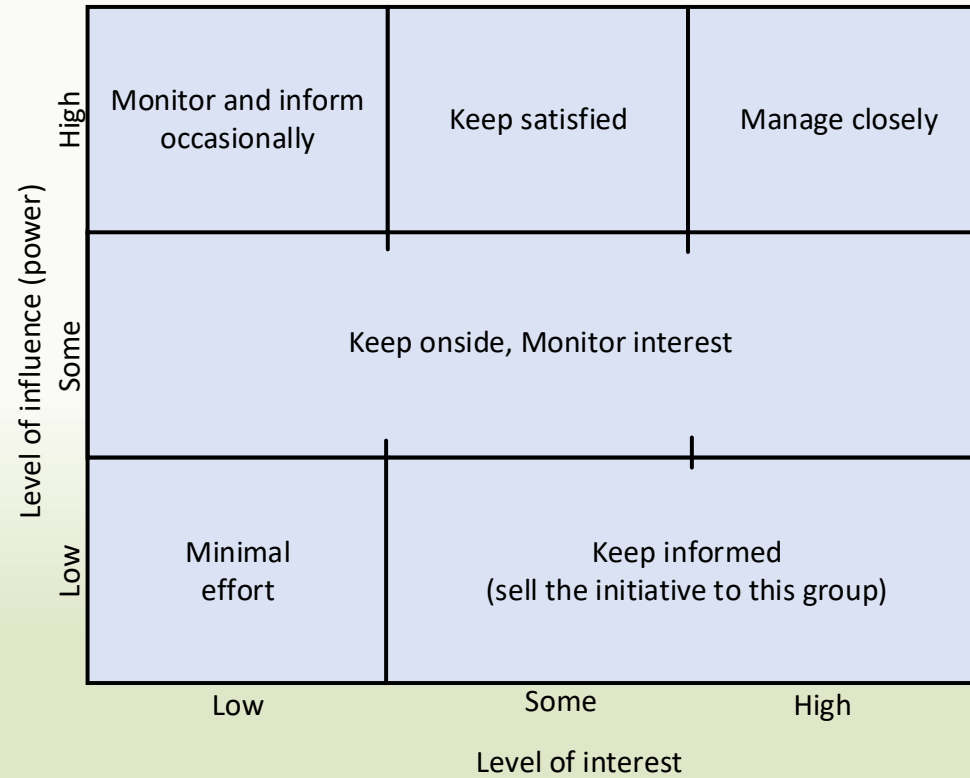
# Probability Impact Grid

➤ From M\_o\_R (TSO 2010)

Probability	0.9	Very High 71-90%	0.045	0.09	0.18	0.36	0.72
	0.7	High 51-70%	0.035	0.07	0.14	0.28	0.56
	0.5	Medium 31-50%	0.025	0.05	0.1	0.2	0.4
	0.3	Low 11-30%	0.015	0.03	0.06	0.12	0.24
	0.1	Very Low up to 10%	0.005	0.01	0.02	0.04	0.08
			Very Low	Low	Medium	High	Very High
			0.05	0.1	0.2	0.4	0.8
			Impact				

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# Power and Influence Grid (PIG)





# Key Performance Indicators (KPI)

- ▶ Value monitored
  - ▶ Servers
  - ▶ Type
  - ▶ Compliant
  - ▶ Non-compliant

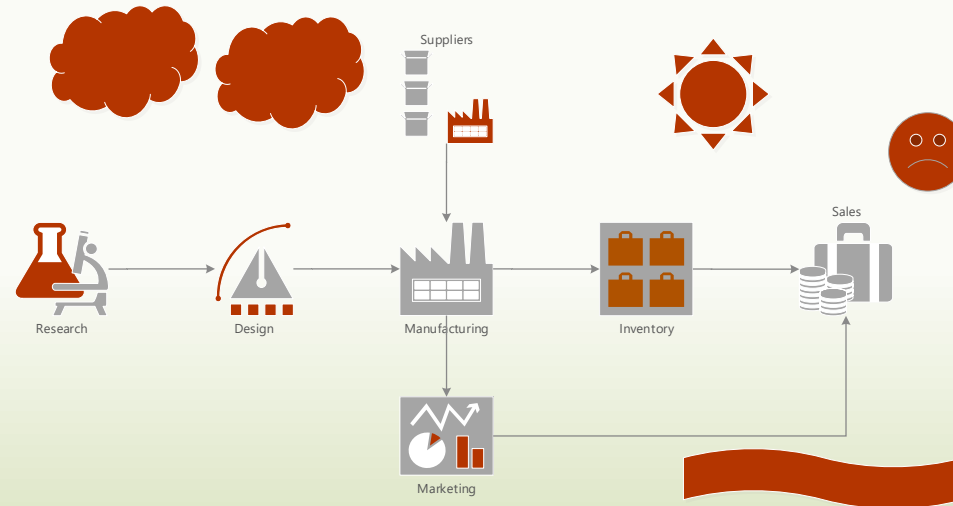
- ▶ Licences
  - ▶ Product
  - ▶ Type
  - ▶ Licences
  - ▶ Seats




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# Rich Picture

➤ Graphical representation of system and environment



<p><b>Background</b></p>  <p>Give your drawing a professional background. Select one on the Design tab.</p>	<p><b>Drag Drop</b></p>  <p>To put a shape between two connected shapes, drag it onto the connector between them.</p>	<p><b>Add Data</b></p>  <p>Add power to diagrams with data. On the Data tab, select Link Data to Shapes.</p>	<p>Finished with these tips? Select the Tip Pane and press Delete</p>
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