



# Delivering quantified benefits through risk management

Emma Price, Director Enterprise Risk,  
riskHive



- Since 1999, riskHive have been at the forefront of risk technology and process, providing Enterprise Risk Management, Risk Modelling, Risk-adjusted Portfolio and Analytical Risk Solutions and Services.
- Our aim has always been simple; to make risk tools, techniques and processes more accessible by making them easier to use, more affordable and faster to deploy with minimum training.
- We provide two risk management solutions:
  - **Arrisca Risk Analyser** for the assurance and analysis of cost and schedule models that are built in MS Excel spreadsheets and MS Project plans.
  - **Enterprise Risk Manager** for the collation, analysis, management and reporting of risk and treatment information.
- All our solutions are designed and delivered by risk professionals for risk professionals.



*“Companies with more mature risk management practices generated the highest growth in revenue, EBITDA and EBITDA/ EV”*

*“Companies in the top 20% of risk maturity generated three times the level of EBITDA as those in the bottom 20%.”*

*Ernst & Young, Turning Risk into Results, 2012*



- What are 'mature' risk management practices?
  - There is a formal method for defining acceptable levels of risk across the portfolio which drives accountability and ownership.
  - Risk information is actively used to inform decision making across the portfolio.
  - Project risk reporting is effective and coordinated so that current information about risks is incorporated into a portfolio view.
  - Projects conduct two-way, open risk communications with external stakeholders such as suppliers, partners etc.
  - A common risk framework and language has been adopted across the portfolio.
  - The project accepts and owns the right risks to achieve competitive advantage.
  - Controls around key processes are monitored and improved.
  - Projects use analytics to optimise the risk portfolio and improve decision-making.
- *“Effectively harnessing technology to support risk management is the greatest weakness or opportunity for most organizations.” EY, 2012*

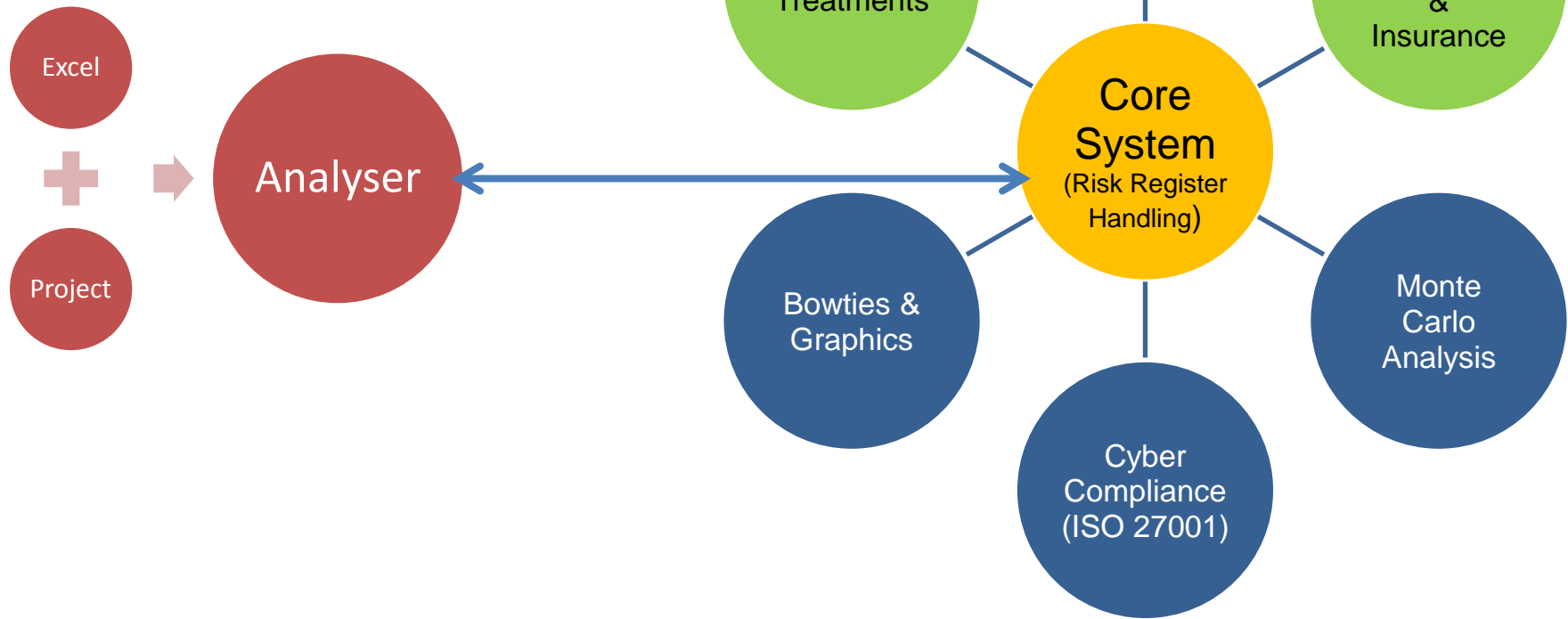


- Reductions in:
  - risk process overlaps and inefficiencies - resource savings;
  - the likelihood of costly last minute treatment actions; and
  - the likelihood of missed milestones and project delays due to unexpected or badly managed risks eventuating.
- Avoidance of:
  - penalties that may have otherwise been awarded for project overruns; and
  - costs accrued over and above that agreed as part of a fixed price contract.
- Identification of common risks, causes etc - streamlined activities.
- Cost savings or increases in project revenue may be recognised through the early exploitation of good news.
- Reduction in insurance premiums.
- Access to capital/ cost of debt.



3 solutions available:

- **Core System**
- **ERM Standard**
- **ERM Professional**





- riskHive ERM helps identify information such as:
  - Which projects/ programmes represent greatest risk to portfolio;
  - Consolidated overview of risks, issues and interdependencies within the most important projects/ programmes;
  - Tangible business benefits of programmes and projects i.e. overall economic value of portfolio;
  - Proactive actions on key risks or groups of risks;
  - Proximity of significant risks and combined impact of risk groups; and
  - Validation of cost and schedule information.

## ENTERPRISE RISK MANAGEMENT (DEMO)

Project: Corporate

Sponsor: Ian.Baker  
 Manager: Emma.Price  
 Data Set: Global Corp

Project Value: £3,425,000,000  
 Contingency: £41,000,000

[Project Summary](#)  child nodes

Version: 4.0 Build: 1.55  
 User: RM3:emma.price  
[Log out](#)

- Corporate
  - A&D
  - Professional Services
  - Cyber & Security
  - Investments
  - Government
  - Banking & Finance
  - Construction

Summary New Duplicate Delete Adv. Search Columns Search:

Groups Tools Administration

and Descendant Risks Filter: all items Cost: UK Pound Time: Days

GCID	Color	Category	Sub-Category	Description	Owner	Area	Value	Prox.	Score	Risk Score	Prob	Cost	Time
GC1093				There is a threat that Specialist contractors are required	A.User	Tax Operations	£50,001		25	400	5	5	
GC0885	Red	Operational	Technology	There is a threat that data management becomes more complex		Communication and investor relations	£100,000		25	400	5	5	
GC0886	Red	Strategic	Corporate	There is a threat that data quality is corrupted	Emma.Price	Communication and investor relations	£25,000	141	20	300	4	5	4
GC0066	Green	Strategic	A&D	There is a risk that fluctuations in defence spending		Governance	€208,333.33	2	20	200	5	4	3
GC0081	Green	Financial	Mining	There is a threat that Commodity prices and global demand for products remain uncertain		Tax Operations	£5,000,000		20	200	5	4	
GC0049	Green	Operational	Construction	There is a threat that there is an inability to execute projects to customer requirements and on a timely basis		Mergers, Acquisitions and Divestiture	£1,000,000		20	300	4	5	5
GC0038	Green	Strategic	Services	There is a threat that there is a failure to win a strategic or significant bid or rebid		Liquidity and Credit	£500,000		20	300	4	5	
GC0034	Green	Financial	Construction	There is a threat that changes in the level or timing of customer spending or investment plans	J.Smith	Tax Operations	£0		20	300	4	5	4
GC10932	Red	Strategic	Emma P	There is a threat that there is a failure to maintain and grow market share due to	A.User	Market Dynamics	£500,000		20	300	4	5	4
				There is a risk that political changes such as political instability and civil disturbances, changes to government									





## Summary Report

**Project Node** Cyber & Security  
**Project Value** £25,000,000  
**Risk Allocation** £24,860,000  
**Total Risks** 10

**Contingency** £1,000,000  
**Unallocated** -£23,860,000

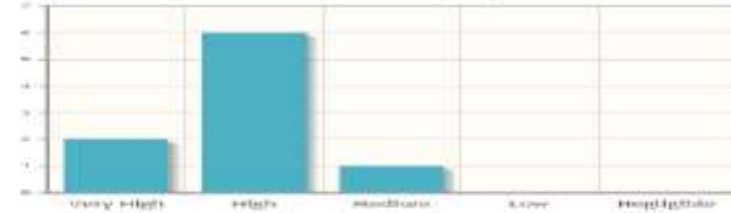
**Sponsor** Ian.Baker  
**Manager** Emma.Price  
**Data Set** Global.Corp

Min' Risk (%)	Exp' Risk (%)	Max' Risk (%)	Likely (%)	Prob' Mean (%)
£7,535,000 (30%)	£11,535,000 (46%)	£19,035,000 (76%)	£3,600,000 (14%)	£5,140,750 (20%)

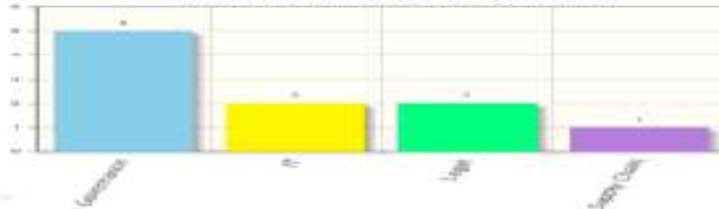
Number of Risks by Status



Number of Risks by Level



Number of Risks by Category



Code	Project	Title	Mitigation	Prox.	Alloc.
GC0124	Cyber & Security	There is a threat that Vulnerabilities are rising in nontraditional enterprise infrastructures	Develop plan for monitoring use of personal mobile devices on site	263	£10,000,000
GC0119	Cyber & Security	There is a threat that changes in attack motivation are increasing security risk	Consider main motives for attack and identify data most at risk	49	£5,000,000
GC0123	Cyber & Security	There is a threat that Web applications continue to expose the enterprise	Ensure information potentially important to attackers is not included in the application	170	£5,000,000
GC0121	Cyber & Security	There is a threat that there is successful exploitation of existing vulnerabilities	Track growth and changes in exploit kits	6	£3,500,000
GC0122	Cyber & Security	There is a threat that there is a decline in commercial vulnerability reporting	Ensure security researchers have extensive expertise in a specific application set	263	£1,000,000

### Risks with closest proximity.

Code	Project	Title	Mitigation	Prox.	Alloc.
GC0126	Cyber & Security	There is a threat that an internal attack takes place	Ensure safeguards in place to prevent unauthorised access to confidential data	-1	£50,000
GC0121	Cyber & Security	There is a threat that there is successful exploitation of existing vulnerabilities	Track growth and changes in exploit kits	6	£3,500,000

**ENTERPRISE RISK MANAGEMENT (DEMO)**

Project: Cyber & Security ▼

Sponsor: Ian.Baker  
 Manager: Emma.Price  
 Data Set: Global Corp

Project Value: £25,000,000  
 Contingency: £1,000,000

[Project Summary](#)  child nodes

Version: 4.0 Build: 1.55  
 User: RM3:emma.price  
[Log out](#)

Multi										Search:	
Ribbon											
Update Summary New Duplicate Delete Adv. Search Columns											
XL Registers XL Exports Reports Bowties Groups Tools Administration											
Display: Risks Scenario: Current Show: Node Risks											
Group selected											
Ungroup selected											
Manage Groups											
Item	Score	Risk Score	Prob	Cost	Time						
GC0119	20	300	4	5	4						
GC0123	16	150	4	4	3						
GC0125	16	300	4	4	3						
GC0121	16	150	4	4	3						

Showing 1 to 10 of 10 entries Show 10 entries

First Previous 1 Next Last

3 Merged < Description Information Allocation Mitigation Qualitative Quantitative Commentary Review State Archive >

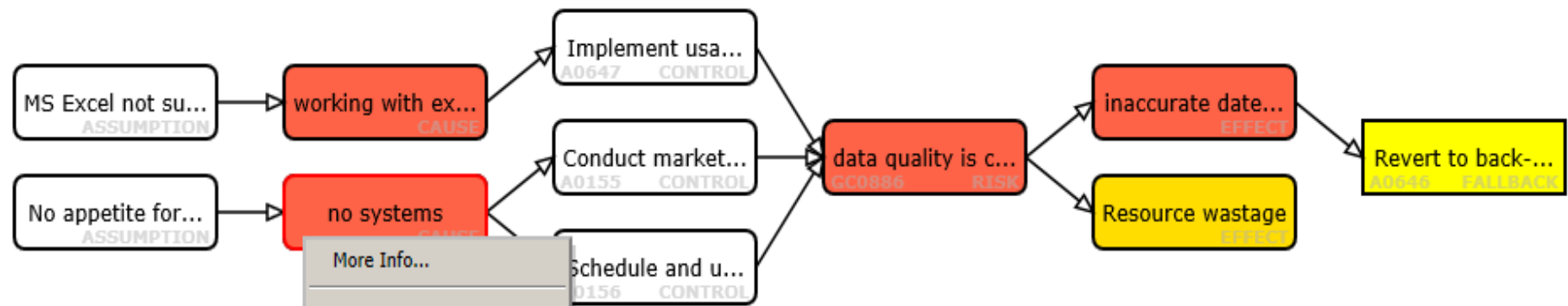
Descriptor:   a threat  a trend  an opportunity  an assumption

Name:  Cause:  Effect:

Full Description and Background

## Bowtie

Right click in the space below to add, edit, remove and see more information.



- More Info...
- Edit...
- Set Probability...
- Delete
- Add New Mitigation...
- Add New assumption...

## Bowtie

Right click in the space below to add, edit, remove and see more information.



[Print](#) [Close](#)

### Configure Risk Analysis

Simulation Control Seed Control

Iterations:    
 Include CCI:    
 Mode:  Full Analysis  Data Collection

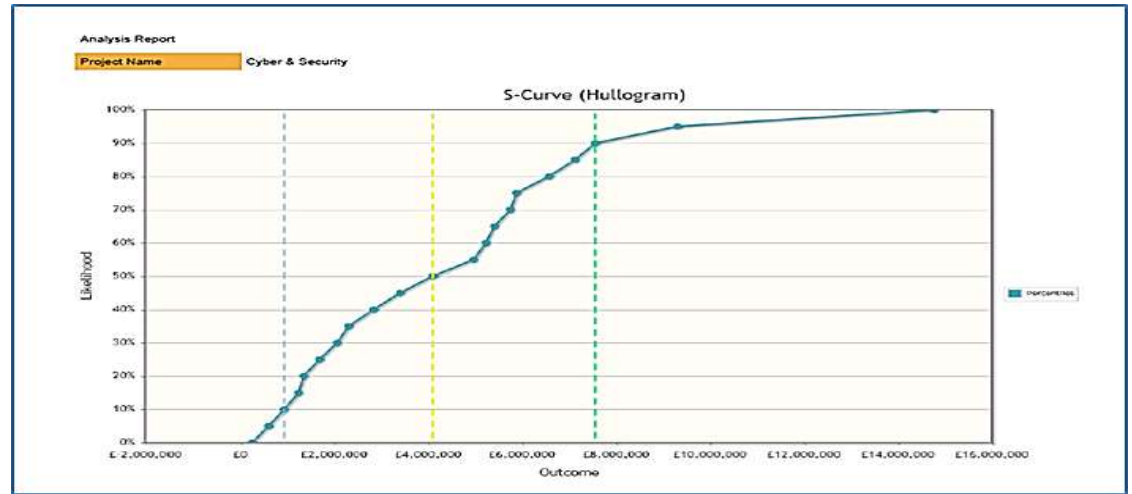
Include Risks:  Quantitative  Qualitative

---

**Analysis Status**

Iterations:                      Elapsed:                      State:

[Show S-curve \(Hullogram\)](#)



File Edit View Favorites Tools Help

https://www.riskhiveonline.com    Riskhive...    Riskhive ERM Online

Project: Cyber & Security    Data: Sec    Order: Corp    Project: Community    child nodes

[FAQ, Feedback & Support](#)

### Risk Analysis

£-200,000    £0    £200,000    £400,000    £600,000    £800,000    £1,000,000    £1,200,000    £1,400,000

Outcome

---

**Project Risk Calculated Data (summed)**

Project Value	Risk Allocation (%)	Min' Risk (%)	Exp' Risk (%)	Max' Risk (%)	Likely (%)	Avg. Imp (%)
£20,000,000	£1,316,229 (6%)	£1,110,000 (5%)	£1,208,333 (6%)	£1,340,000 (6%)	£208,333 (1%)	£704,583 (3%)

---

**Project Risk Stochastic Data (from Monte-carlo simulation)**

0%	10%	50%	80%	90%	100%	Stat' Avg. (%)
£130,513 (0%)	£157,391 (0%)	£1,150,935 (5%)	£1,229,644 (6%)	£1,266,145 (6%)	£1,310,896 (6%)	£754,196 (3%)

---

**Risks that were included in this analysis**

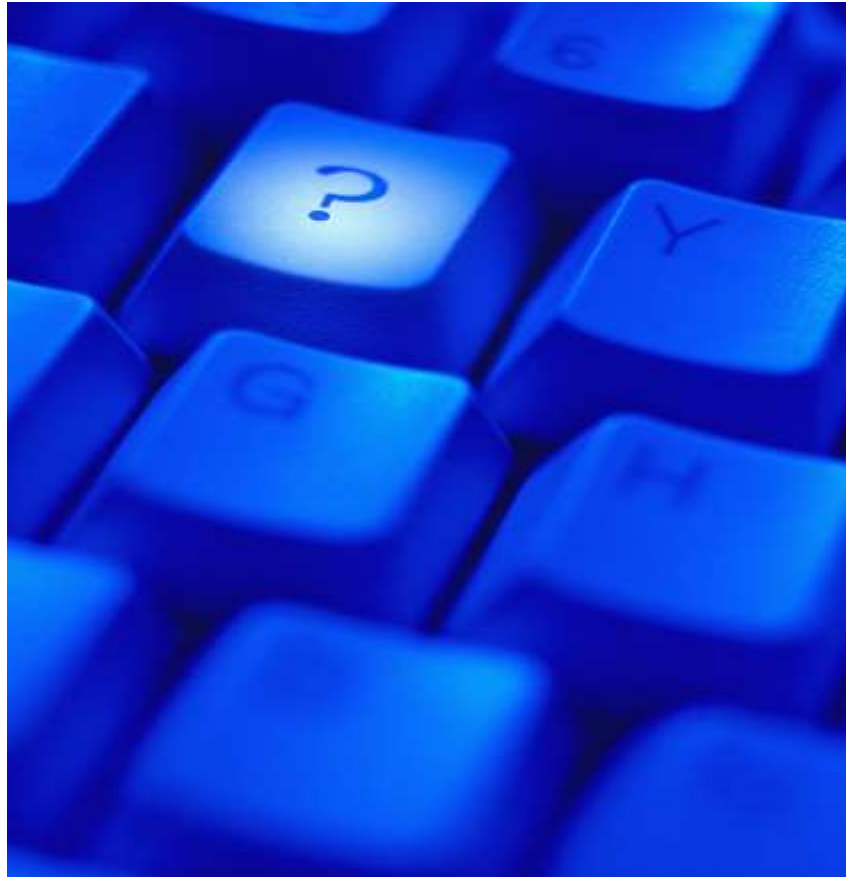
Code	Project	Title	Avg. Imp	Adjustment	Adjusted Value	Stat. Mean	P80 Imp	Alloc.	Shortfall	Assessment
GC0888	P80	There is a risk that insufficient power	£500,000	1.745	£872,603	£550,000	£1,000,000	£959,864	-£40,136	P: 50, I: Constant at 1,000,000
GC0887	P80	There is an opportunity that we could benefit (abc)	£183,333	1.745	£319,954	£184,671	£230,614	£322,290	£138,956	P: 100, I: Triangular, 100,000, 150,000, 300,000
GC10933	P80	There is a risk that building damage	£21,250	1.745	£37,085	£19,525	£29,689	£34,075	£9,075	P: 85, I: Uniform 10,000 to 40,000

---

©riskHive Ltd 2013



- Effective risk management practices deliver quantified benefits.
- Using risk software to support the risk management process can:
  - Reduce the time and effort required to produce risk reports;
  - Facilitate the risk analysis process;
  - Reduce the incidence of human error; and
  - Provide automated alerts/ warnings when circumstances change.
- For more information visit the riskHive stand.





# Delivering quantified benefits through risk management

Emma Price, Director Enterprise Risk,  
riskHive





The riskHive **Arrisca Risk Analyser** is the industry-standard tool for the assurance and analysis of cost and schedule models that are built in MS Excel spreadsheets and MS Project plans. It is used to quality-assure and then risk-adjust cost and schedule forecasts prior to sign-off, release and monitoring through-life by facilitating the Verification & Validation (V&V) and Monte Carlo Risk & Uncertainty Simulation of MS Excel spreadsheets, MS Project plans and parametric models built using Price Systems' TruPlanning application.

### **Benefits:**

- Understand in an instant what drives your outcome and how you can affect it.
- Improve your comprehension of complex models and quickly understand other people's spreadsheets.
- Improve modelling quality, reduce data error rate, identify broken links and heatmap your inputs.
- Add stochastic capability to your data without modifying the workbook or project plan.
- Add Monte Carlo Simulation and Stochastic Analysis to your Excel, Project or TruPlanning models.