



Project Controls

EXPO

London, UK

Project Controls Expo – 14th November 2018
Emirates Arsenal Stadium, London

HOW RISKY IS YOUR PROJECT?
[and what are you doing about it?]



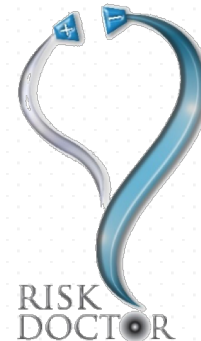
The Risk Doctor

david@risk-doctor.com

Presented by

Dr David Hillson

PMI Fellow, HonFAPM, CFIRM



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The Risk Doctor Partnership

www.risk-doctor.com



Project Controls

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Two key questions

1. How risky is your project?

2. What are you doing about it?



How to answer these questions?

- **Two levels of question & answer:**

1. Project Manager:

Q: What are the risks **in** my project?



A: **Individual risks** (see Risk Register & risk reports)

2. Project sponsor/project owner/customer:



Q: What is the riskiness **of** this project?

A: **Overall project risk** (?????)

What is “individual risk”?

-  Practice Standard for Project Risk Management (2009), PMBoK® Guide (2017)
 - **an uncertain event or condition** that, if it occurs, has a positive or negative effect on a project’s objectives.
-  PRAM Guide (2004), BoK6 (2012)
 - **an uncertain event or set of circumstances** that, should it occur, will have an effect on achievement of one or more of the project’s objectives.

What is “overall project risk”?

-  Practice Standard for Project Risk Management (2009), PMBoK® Guide (2017)
 - Overall project risk represents **the effect of uncertainty on the project as a whole**. It is more than the sum of individual risks on a project.
-  PRAM Guide (2004), BoK6 (2012)
 - Overall risk is **the exposure of stakeholders to the consequences of variation in outcome**, arising from an accumulation of individual risks together with other sources of uncertainty.

Two levels of risk & risk management

- **Individual risks**

... specific events or conditions that might affect project objectives
... positively or negatively ... **Day-to-day project risk management** focuses on individual risks in order to enhance the prospects of a successful project outcome.

- **Overall project risk**

... applies to the whole project ... includes all sources of project uncertainty ... important component of **strategic decision-making, program & portfolio management, and project governance.**

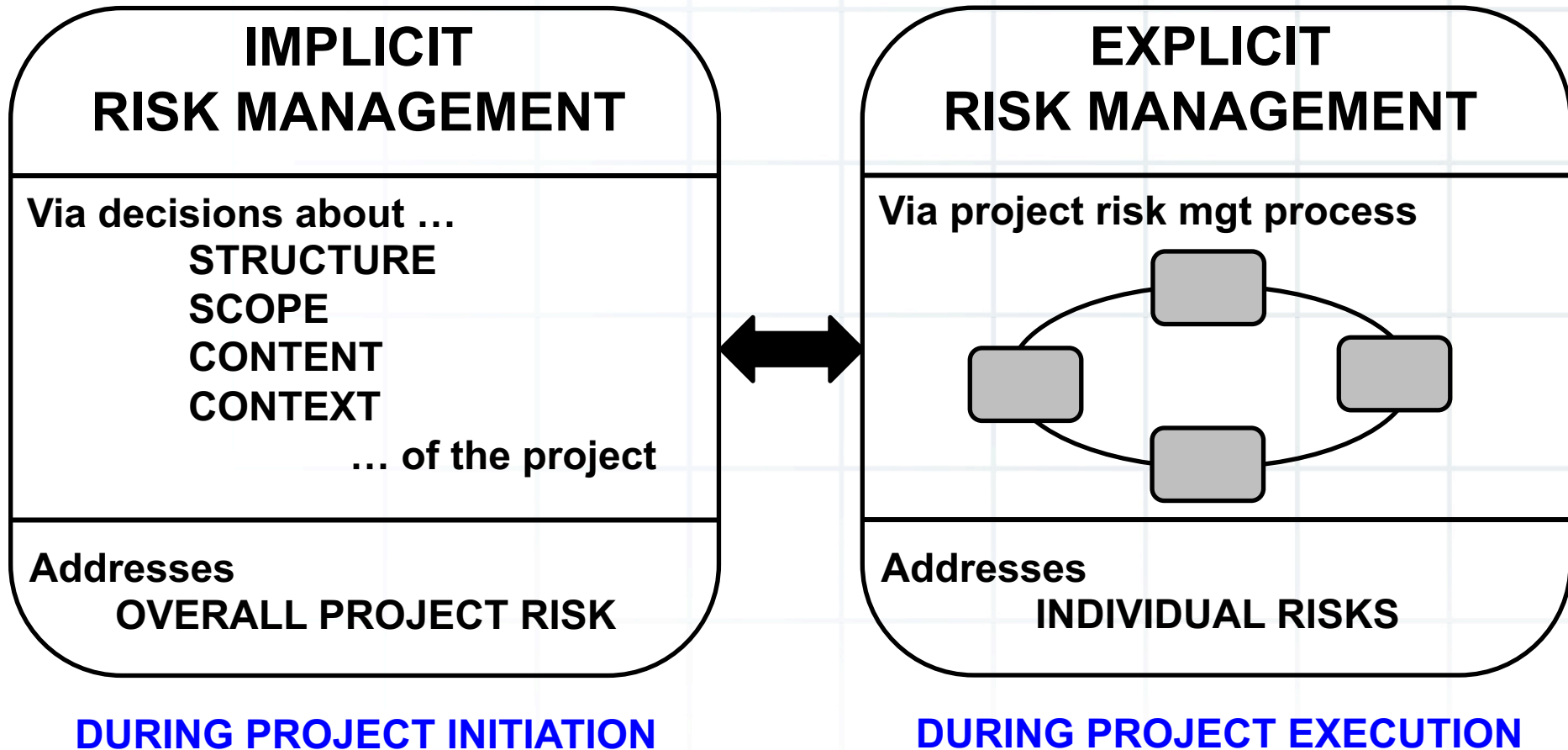
Implications

- **Is this in scope for project managers?**
 - PM is **responsible** for identifying, analysing & managing specific uncertainties within the project (**individual risks**)
 - PM is **accountable** to Project Sponsor for overall risk exposure of the project (**overall project risk**)
- **Yes, but how?**

Current practice

- Most projects only concentrate on managing **individual risks** via risk process = **explicit RM**
- Some assessment of **overall project risk** during project initiation via scoping decisions = **implicit RM**

Implicit and Explicit risk management



Managing overall project risk during project execution

- **Identifying** sources of overall project risk
- **Quantifying** overall project risk
- **Responding** to overall project risk
- **Reporting & monitoring** overall project risk

Identifying sources

- Need **whole-project** perspective
- “Overall project risk” is **one thing**, but has **many sources**, from project context
- Various frameworks exist to find sources:

PESTLE

PESTLIED

STEEPLE

InSPECT

SPECTRUM

TECOP

VUCA

- Use as prompt list, structure for brainstorm, input to SWOT Analysis, agenda for risk interviews, topics for Delphi groups...

Qualitative assessment

- Overall project risk has two dimensions (as for individual risks):
 - **Uncertainty** = probability of project success (or failure)
 - **Effect** = range of potential variation on overall project objectives (+ve and/or –ve)
- Only **one value** for each dimension at any point in time
- Use of standard **P-I Matrix** of limited use (could monitor trends over time)

Quantifying overall project risk

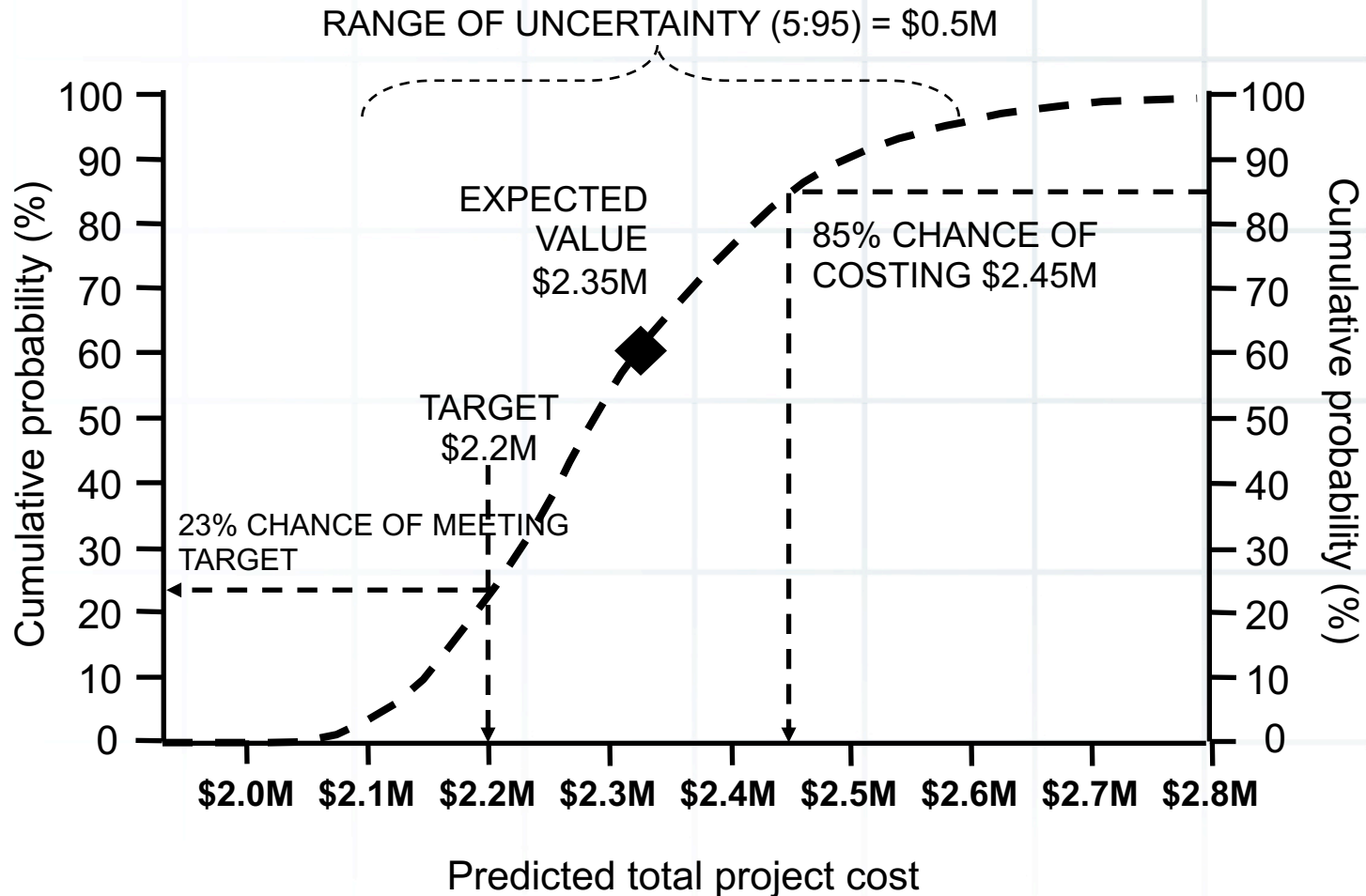
“Effect of uncertainty on the project as a whole”

“Exposure of stakeholders to variation in outcome”

- Key questions with quantitative answers:
 - **How likely** is this project to succeed (or fail)?
 - What is potential **range of variation** in outcome?
- Standard **Monte Carlo simulation** answers these

Quantifying overall project risk

An example Monte Carlo output (cost)



Quantifying overall project risk

An example Monte Carlo output (cost)

- **“How risky is this project?”**
- Quantitative answers:
 - **How likely** is this project to succeed?
 - Probability of meeting \$2.2M target = 23%
 - Expected value = \$2.35M (+7%)
 - **What is potential range of variation** in outcome?
 - Total potential range = \$0.5M (= 22% of project value)
 - Realistic best case (5th percentile) = \$2.1M (– 4%)
 - Realistic worst case (95th percentile) = \$2.6M (+18%)

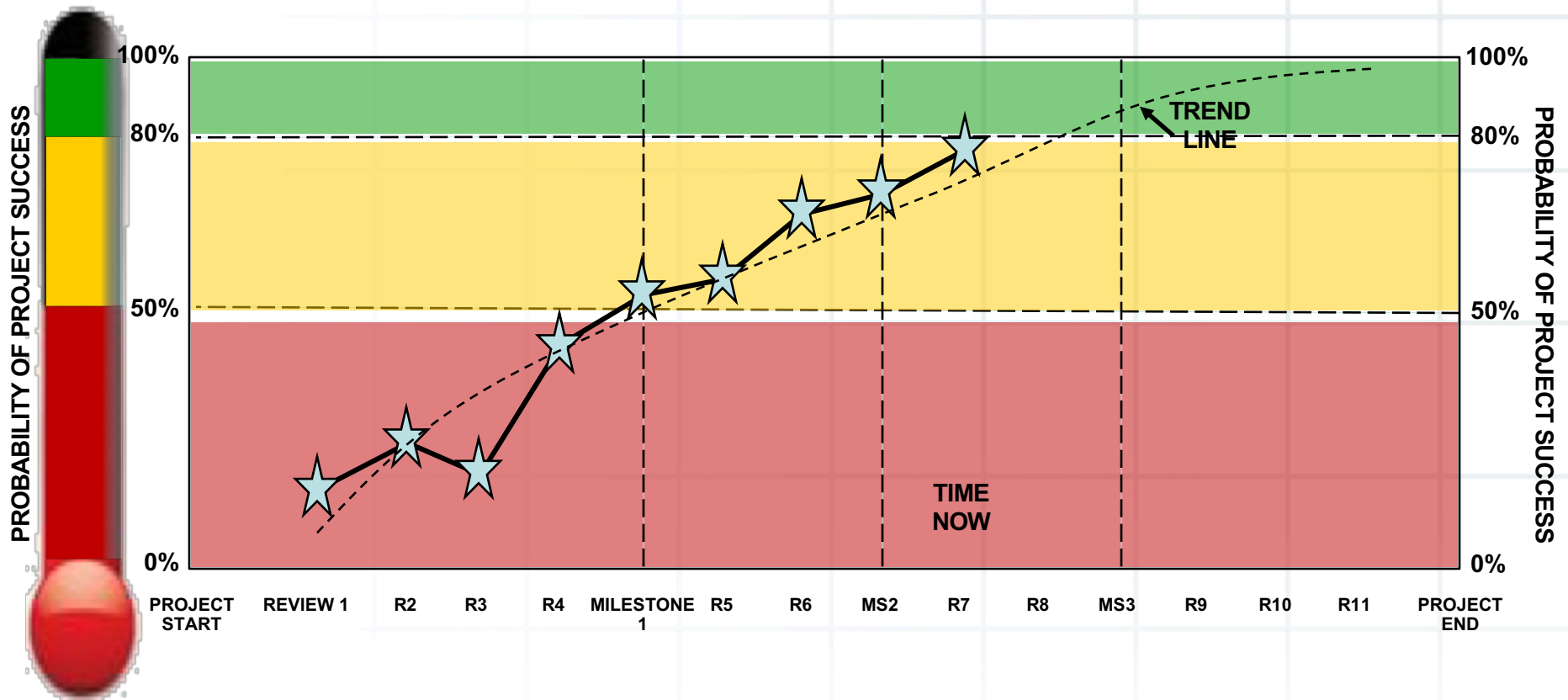
“What are you going to do about it?!”

- Project sponsor makes appropriate risk-based decisions on future of project
- **Response options** similar to individual risks:
 - Avoid (–)**: de-scope high-risk elements or cancel project
 - Exploit (+)**: increase scope to create additional value
 - Transfer (–) / Share (+)**: Involve third-parties via JV, SPV, merger, subcontract or sell project
 - Reduce (–) / Enhance (+)**: increase probability of success, reduce potential variation & shift spread to upside
 - Accept (–/+)**: ensure adequate contingency, monitor risk level

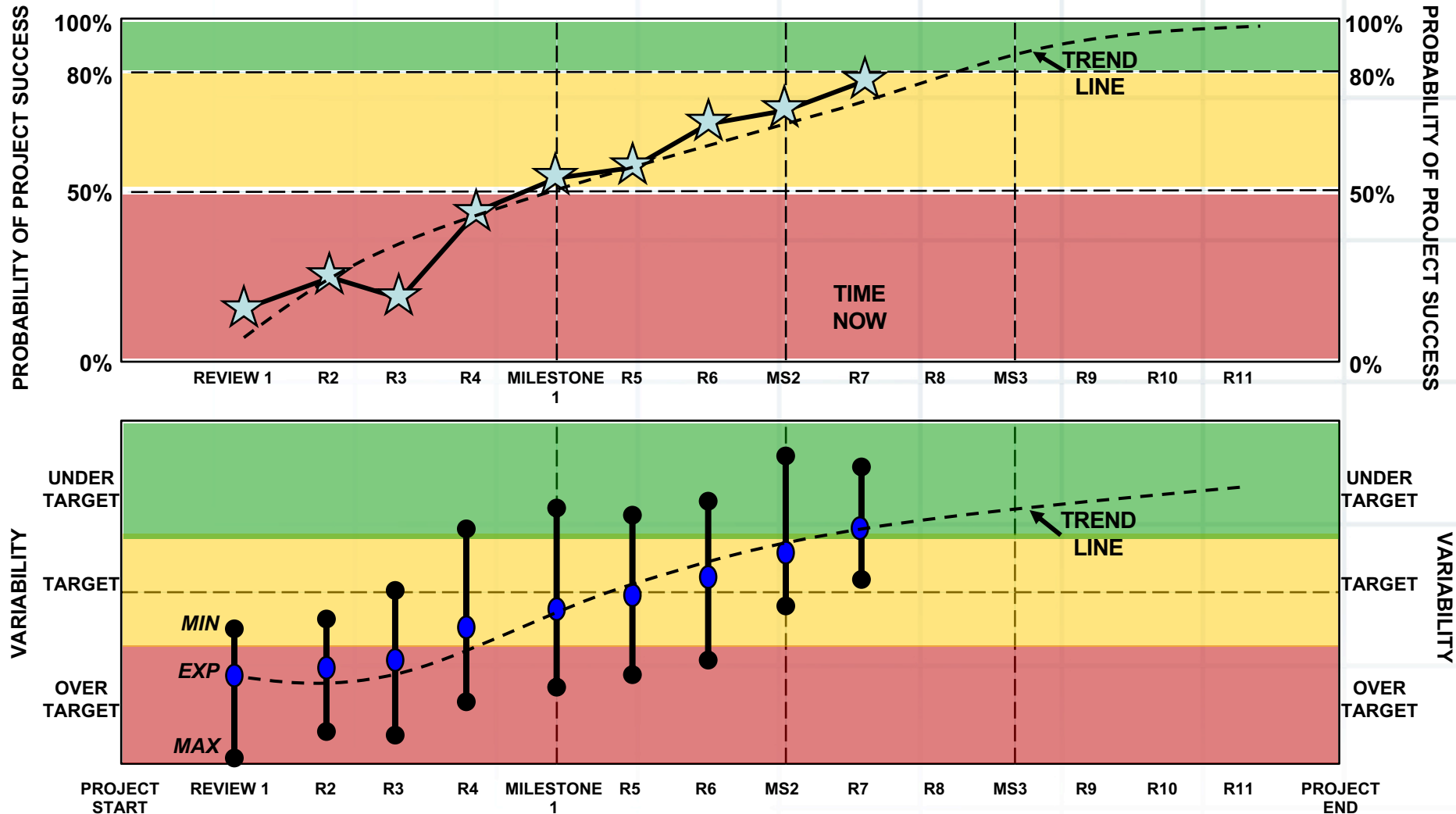
Reporting overall project risk

- Update at key milestones, tell stakeholders:
 - Current level of overall project risk
 - Major causes of overall project risk
 - Key responses underway or planned
 - Trend in overall project risk since project started
 - Predicted level of overall project risk at next reporting point
- Monitor changes and trends
 - No common practice formats
 - Suggested dashboard components

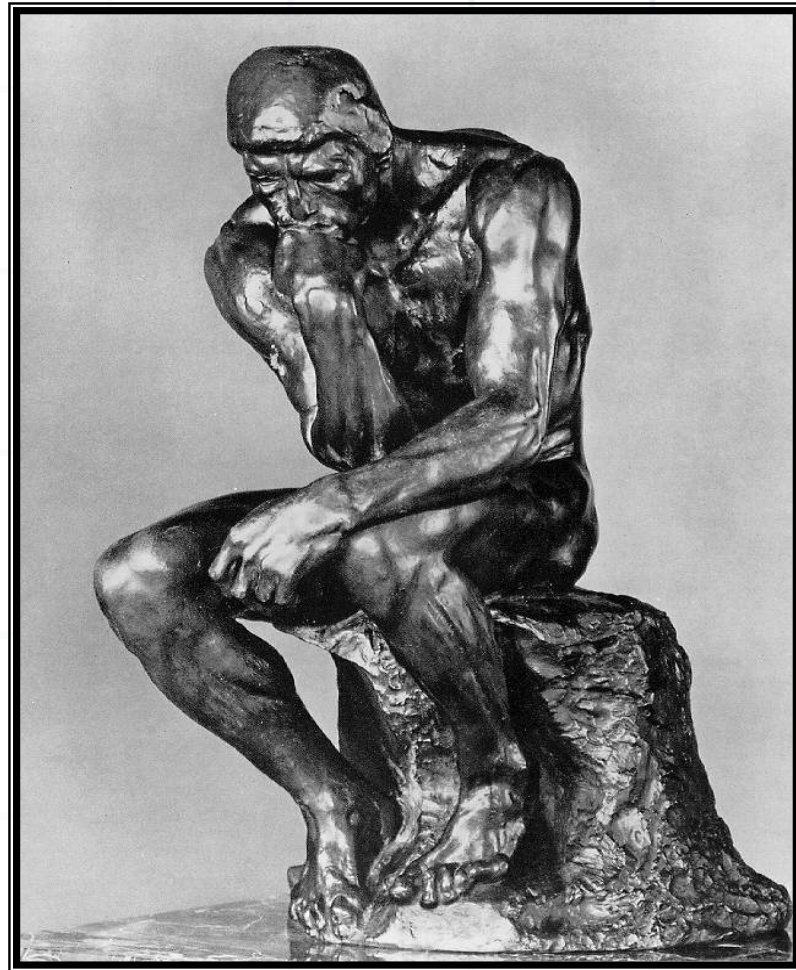
Overall Project Risk Barometer




Overall Project Risk Barometer + variability



Final thoughts



Next steps for practitioners & profession

- 
- **Risk matters**, including both **individual risks** and **overall project risk**
 - Both need to be **managed proactively**
 - Best-practice needs to **evolve** to cover both
 - PM standards must **provide guidance** for both

We must deal equally with **the risks in the project** and **the riskiness of the project**

Final questions

- **How risky is your project?!**
- **What are you doing about it?**
- Do you include **overall project risk** in your thinking & practice?
 - If not, why not?
 - Would it be possible?
 - What changes are required?

Thank you
Any questions?



For further information...

Dr David Hillson
The Risk Doctor Partnership



+44(0)7717.665222



david@risk-doctor.com



www.risk-doctor.com



YouTube.com/RiskDoctorVideo



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