

The 10 +/-2 Factors For Estimate Success

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The detail can be found in the paper!

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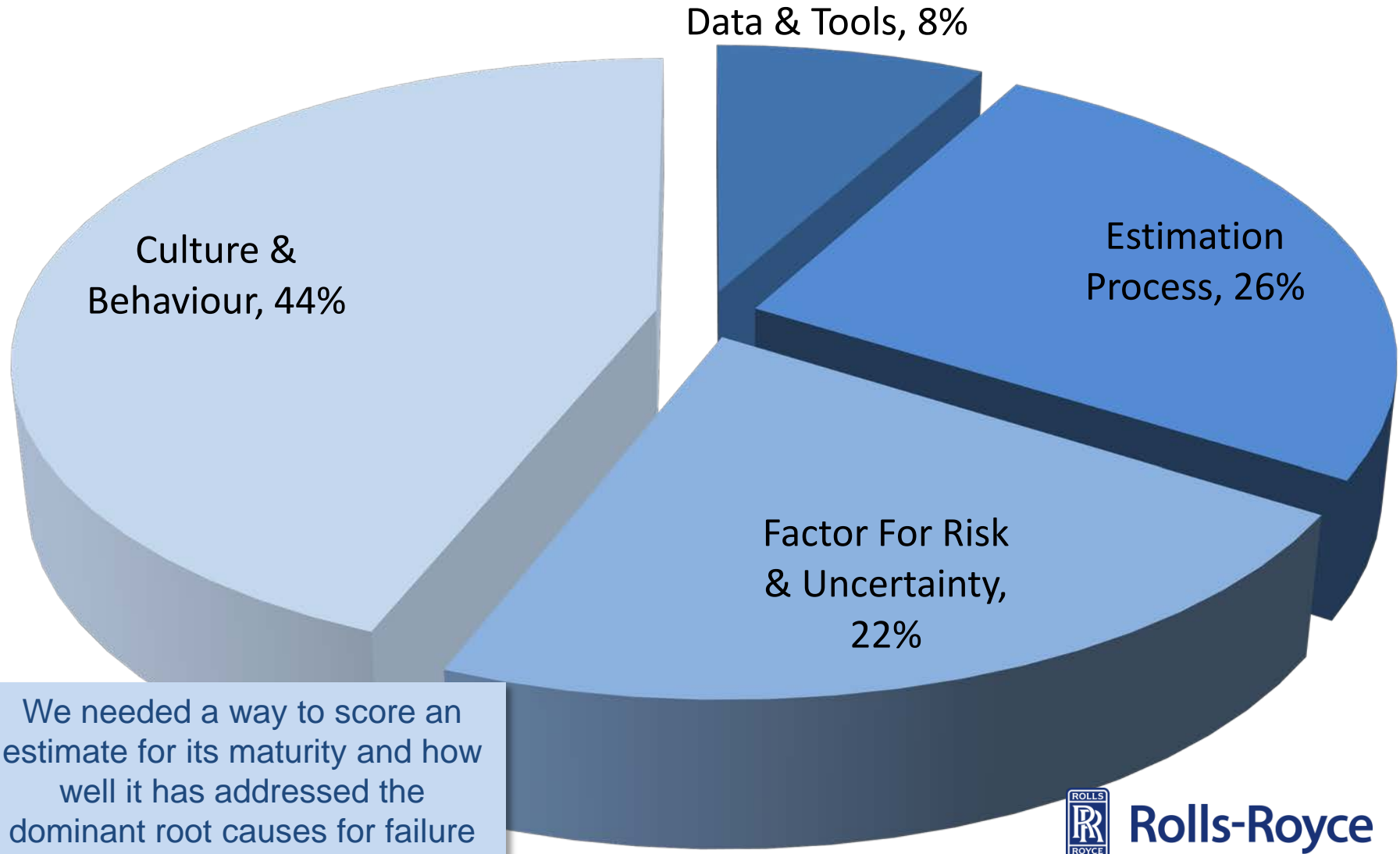
Has this ever happened to you?

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- You were asked to make an informal “guess”, but then it became your formal budget.?
- You needed a quick informal estimate but the estimator spent months developing a rigorous estimate?

The source of estimate problems




We needed a way to score an estimate for its maturity and how well it has addressed the dominant root causes for failure



What matters rather than what we “moan” about!

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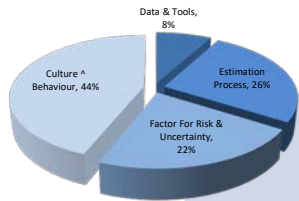
A woman in a red long-sleeved shirt and blue skirt stands in the rain, holding a black umbrella and a beer. She is standing next to a black charcoal grill on a lawn. The background is a brick wall with a window. The scene is set outdoors in a grassy area.

We wanted to understand what really matters NOT just what happens.



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The Journey



Root Cause +
PFMEA analysis
(>120 causes)

Estimation Standard
intended to mitigate
dominant root causes.
55 Factors grouped
into **11 Themes**

Assessed estimates
for their
compliance to the
standards.
134 completed
projects

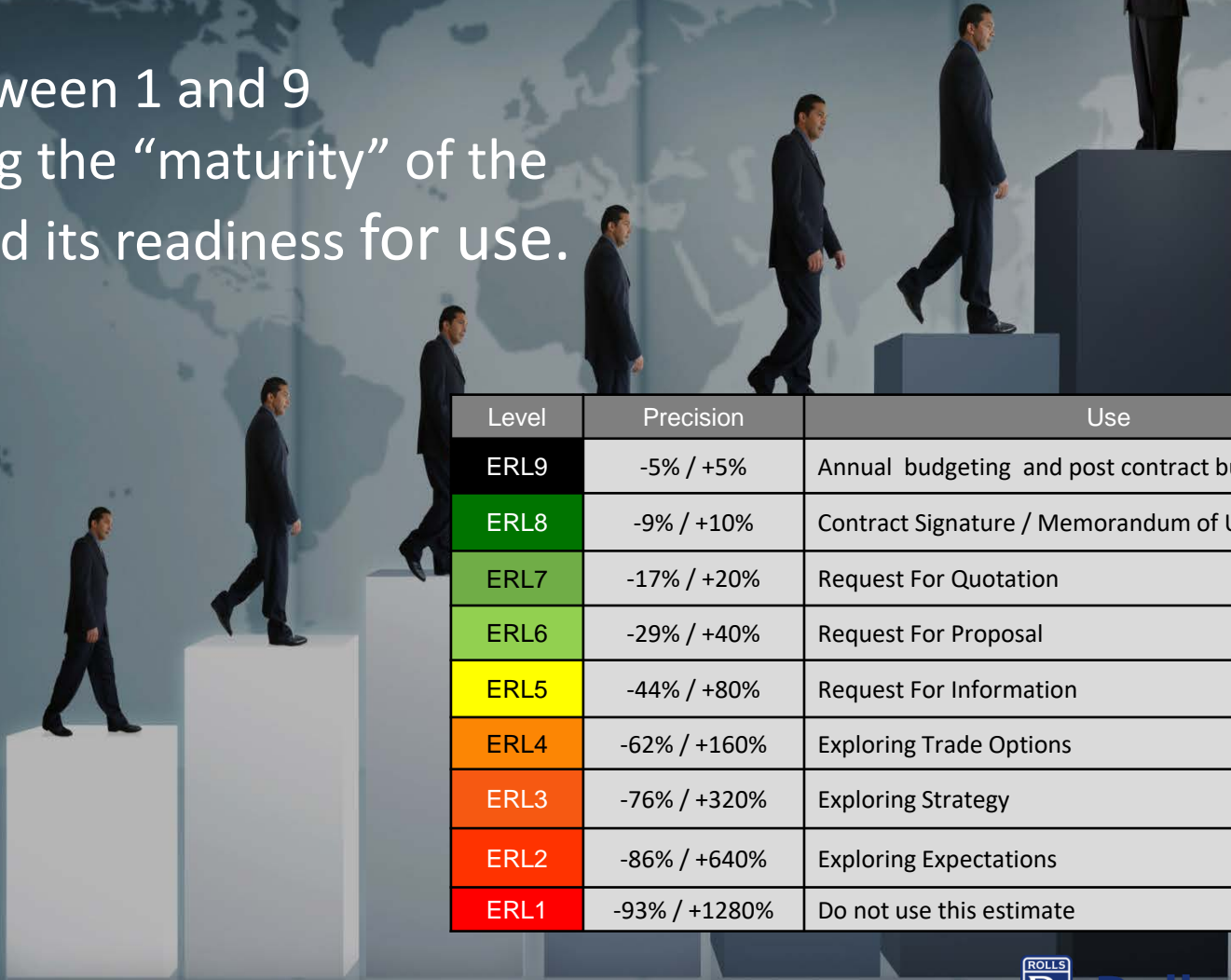
ERL assessment – a
weighted
assessment that
can score an
estimate for its
maturity at
mitigating the
dominant root
causes for estimate
problems.



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Estimate Readiness Levels

A score between 1 and 9 representing the “maturity” of the estimate and its readiness for use.



Level	Precision	Use
ERL9	-5% / +5%	Annual budgeting and post contract budget baseline
ERL8	-9% / +10%	Contract Signature / Memorandum of Understanding
ERL7	-17% / +20%	Request For Quotation
ERL6	-29% / +40%	Request For Proposal
ERL5	-44% / +80%	Request For Information
ERL4	-62% / +160%	Exploring Trade Options
ERL3	-76% / +320%	Exploring Strategy
ERL2	-86% / +640%	Exploring Expectations
ERL1	-93% / +1280%	Do not use this estimate



Measuring estimate accuracy (%=Error)

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A man with dark hair and a beard, wearing an orange t-shirt, is shown from the chest up. He has a wide-eyed, shocked expression, with his mouth covered by his right hand. The background is a plain, light-colored wall.
$$\%Error = (Estimate / Actual) - 1$$



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We had to correlate to ERL not to %-Error

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If we had 1000 people doing the same estimate, to the same level of maturity, we would get a range of values not the exact same value.

There was no correlation between estimation practice and %Error, but there was with ERL which represents a range.



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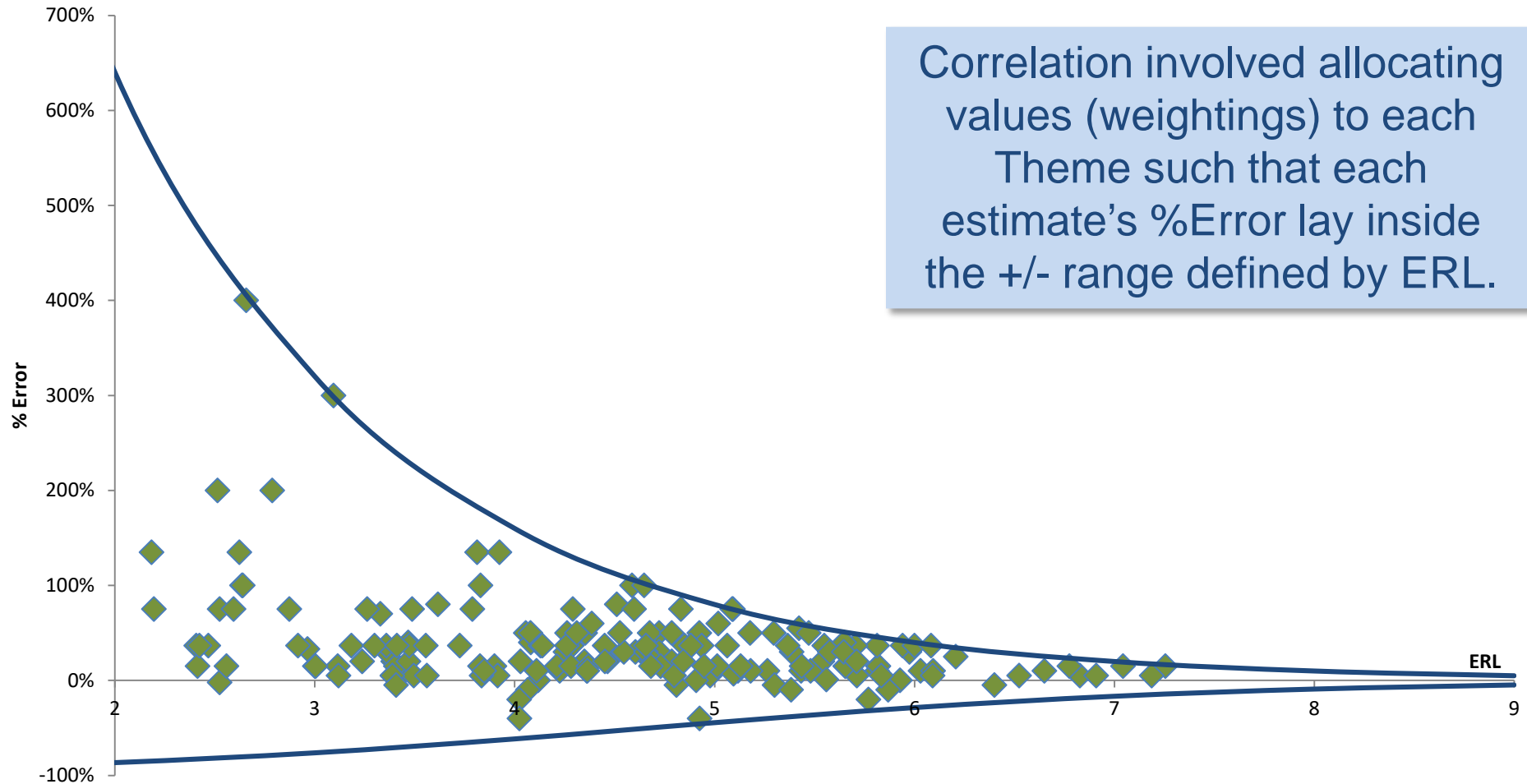
1. Project Understanding
2. Risk & Uncertainty
3. Estimator competency
4. Historic data
5. Estimate documentation
6. Estimate effort

The 55 Factors of the estimate standards are allocated to 11 Themes.
134 estimates were scored, based on a pre-defined criteria, for how well they met each Theme



Estimate Accuracy vs ERL

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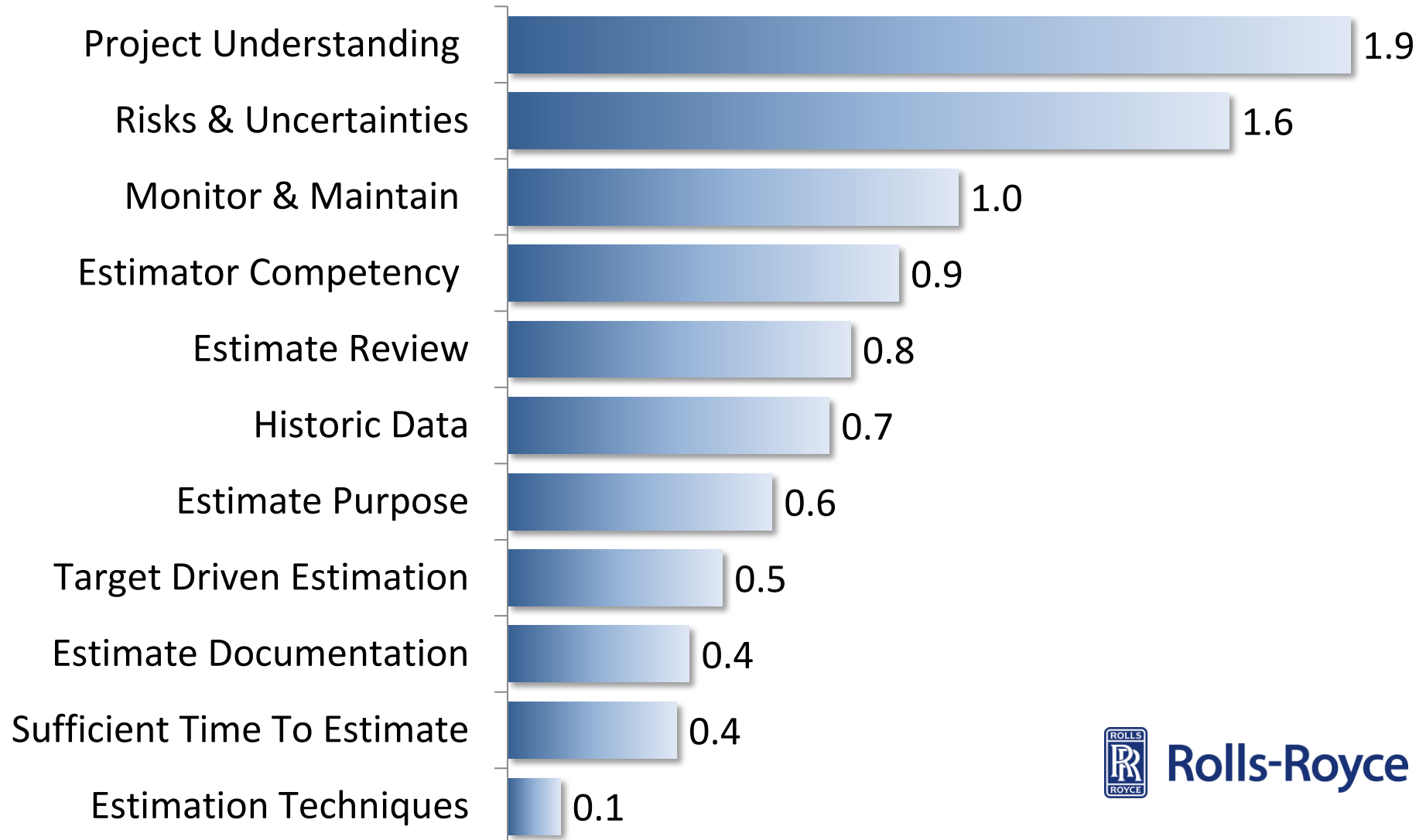
What's Matters Most?

- Estimate Documentation
- Estimate Purpose
- Estimate Review
- Estimation Techniques
- Estimator Competency
- Historic Data
- Monitor & Maintain
- Project Understanding
- Risks & Uncertainties
- Sufficient Time To Estimate
- Target Driven Estimation



What matters!

ERL Points



Ask the audience!

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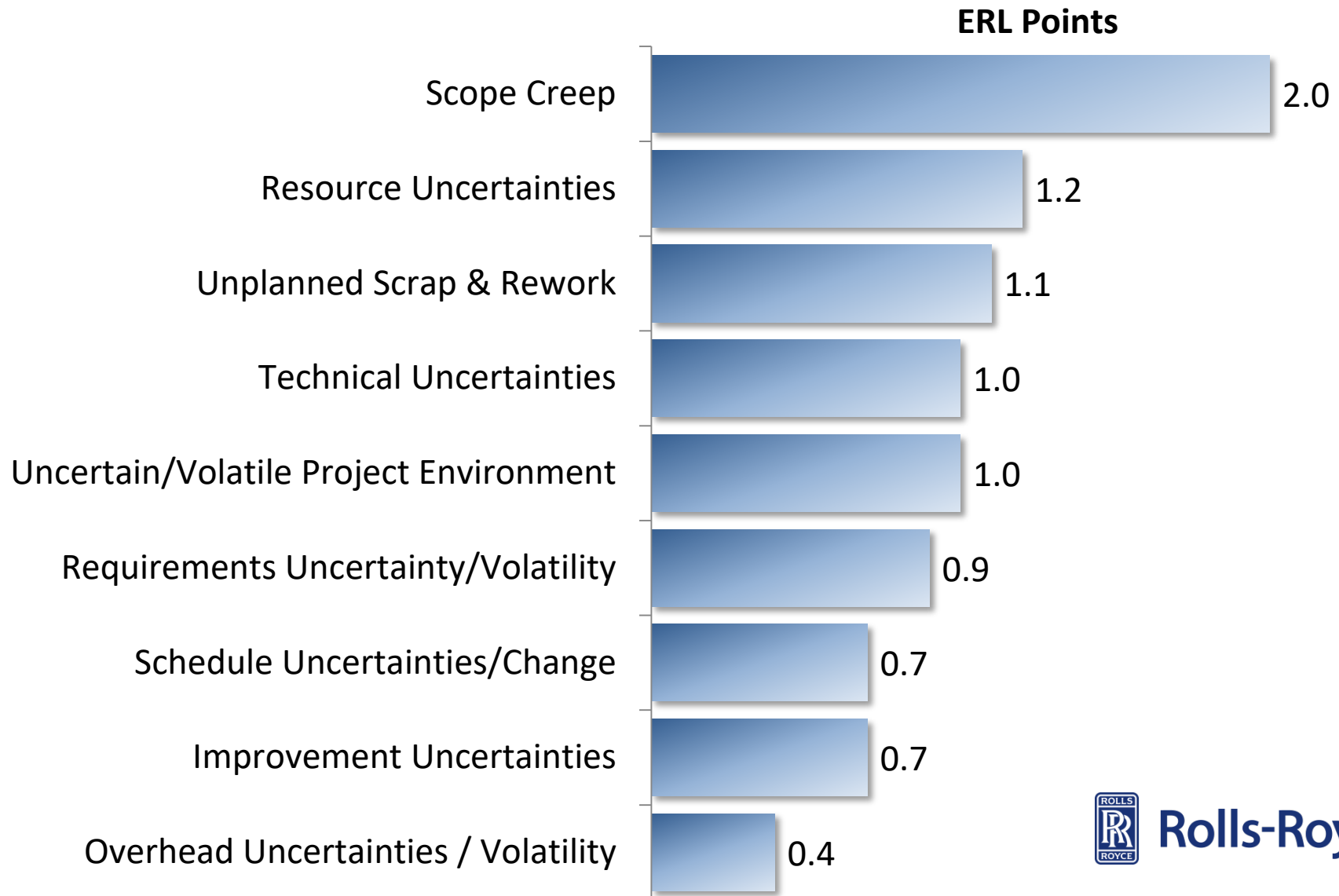
What's your greatest source of risk & Uncertainty?

- Improvement Uncertainties
- Overhead Uncertainties / Volatility
- Requirements Uncertainty/Volatility
- Resource Uncertainties
- Schedule Uncertainties/Change
- Scope Creep
- Technical Uncertainties
- Uncertain/Volatile Project Environment
- Unplanned Scrap & Rework



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Sources of Risk & Uncertainty



Ask the audience!

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During project execution, what is most important to monitor?

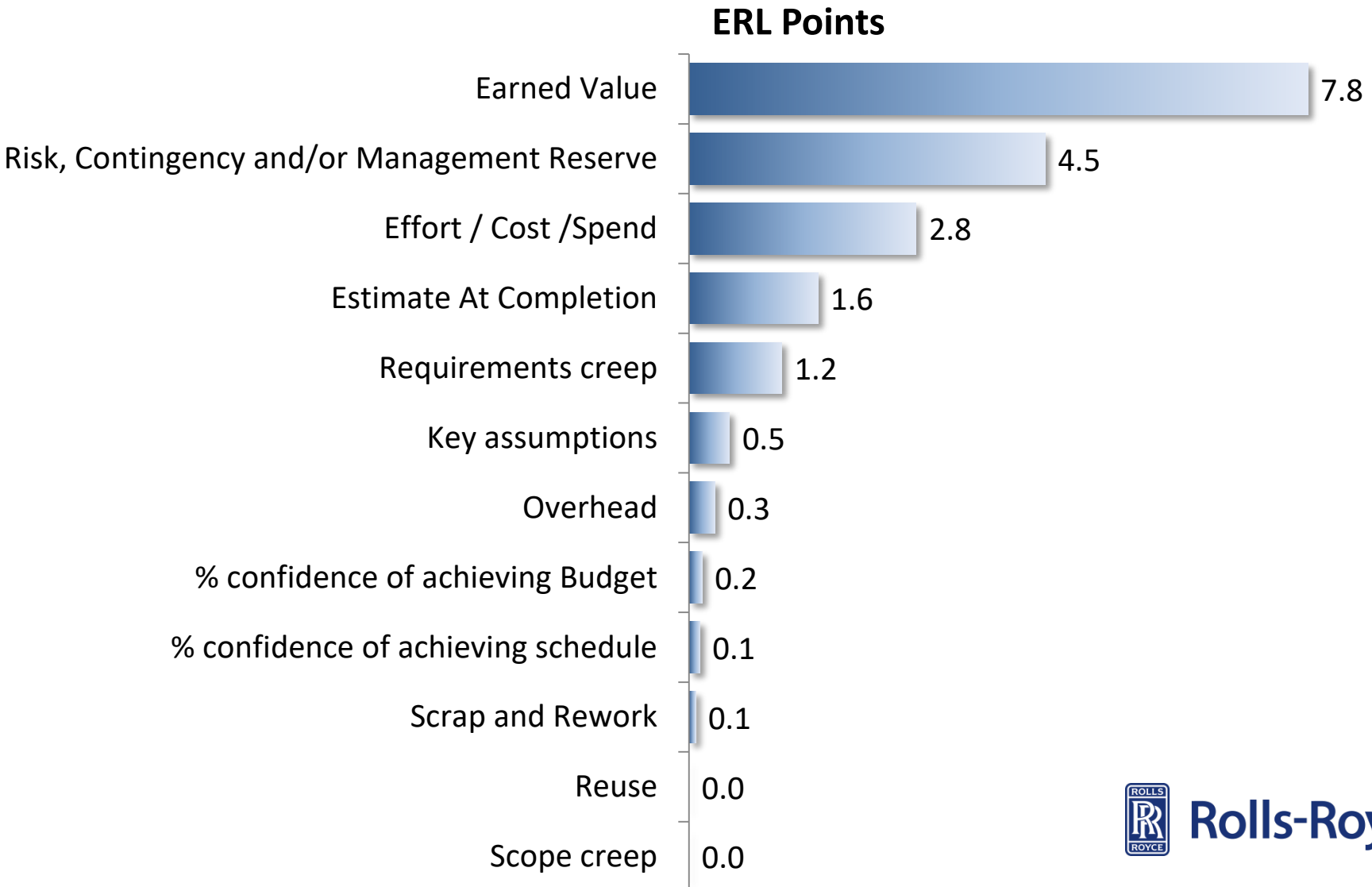
- % confidence of achieving Budget
- % confidence of achieving schedule
- Earned Value
- Effort / Cost /Spend
- Estimate At Completion
- Key assumptions
- Overhead
- Requirements creep
- Reuse
- Risk, Contingency and/or Management Reserve
- Scope creep
- Scrap and Rework



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The Correlation Between Monitor & Estimate Accuracy

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Ask the audience!

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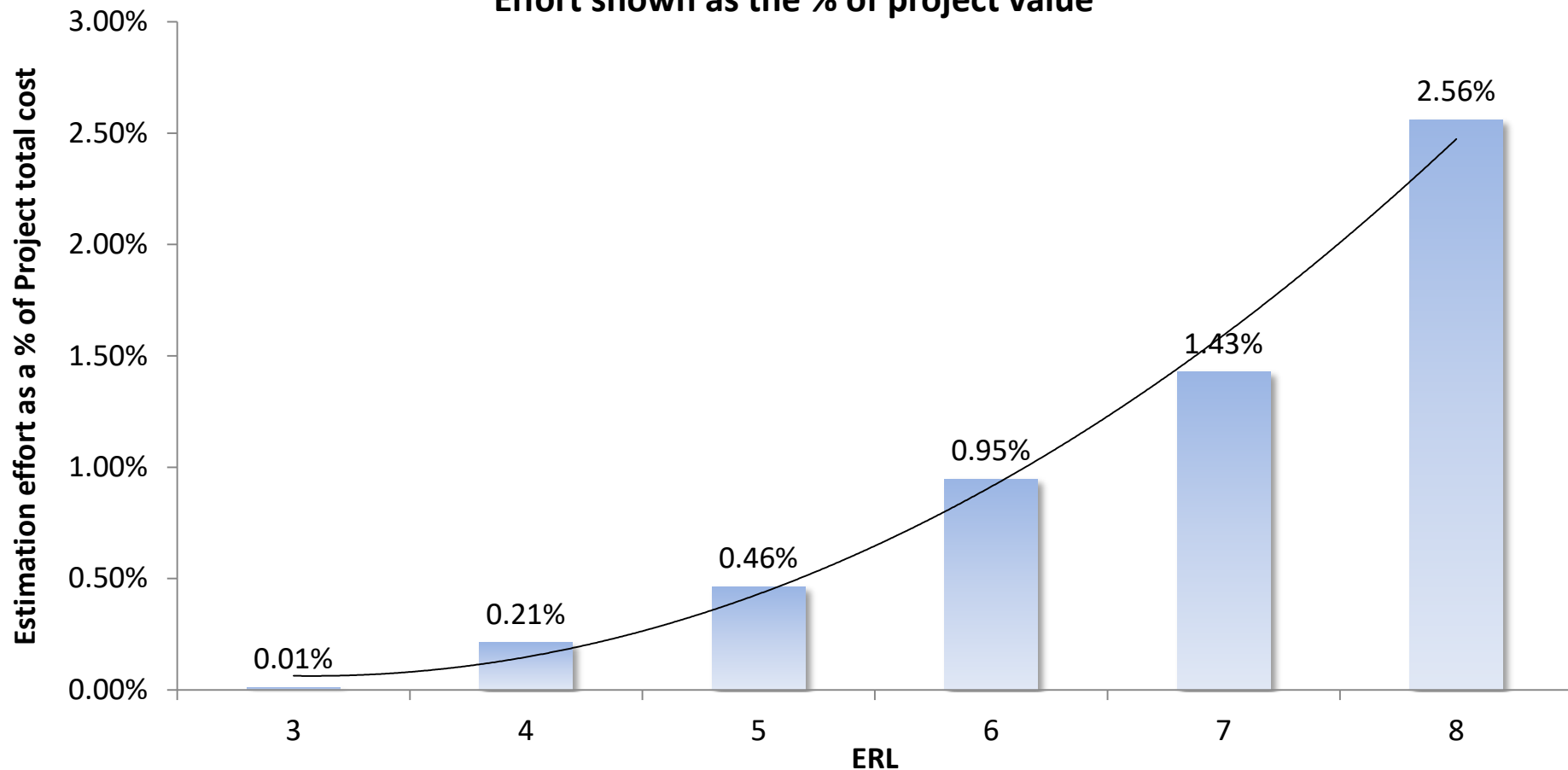
How long
does it take
to develop an
estimate?



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Estimation Effort vs ERL

Estimate Effort vs ERL
Effort shown as the % of project value



Ask the audience!

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Which estimation techniques are most accurate?

- Bean Counters
- Bottom up
- COCOMO
- Comparative
- Forecast
- Judgement
- Monte Carlo
- Monte-Carlo
- Multi-People
- Parametric
- Top down

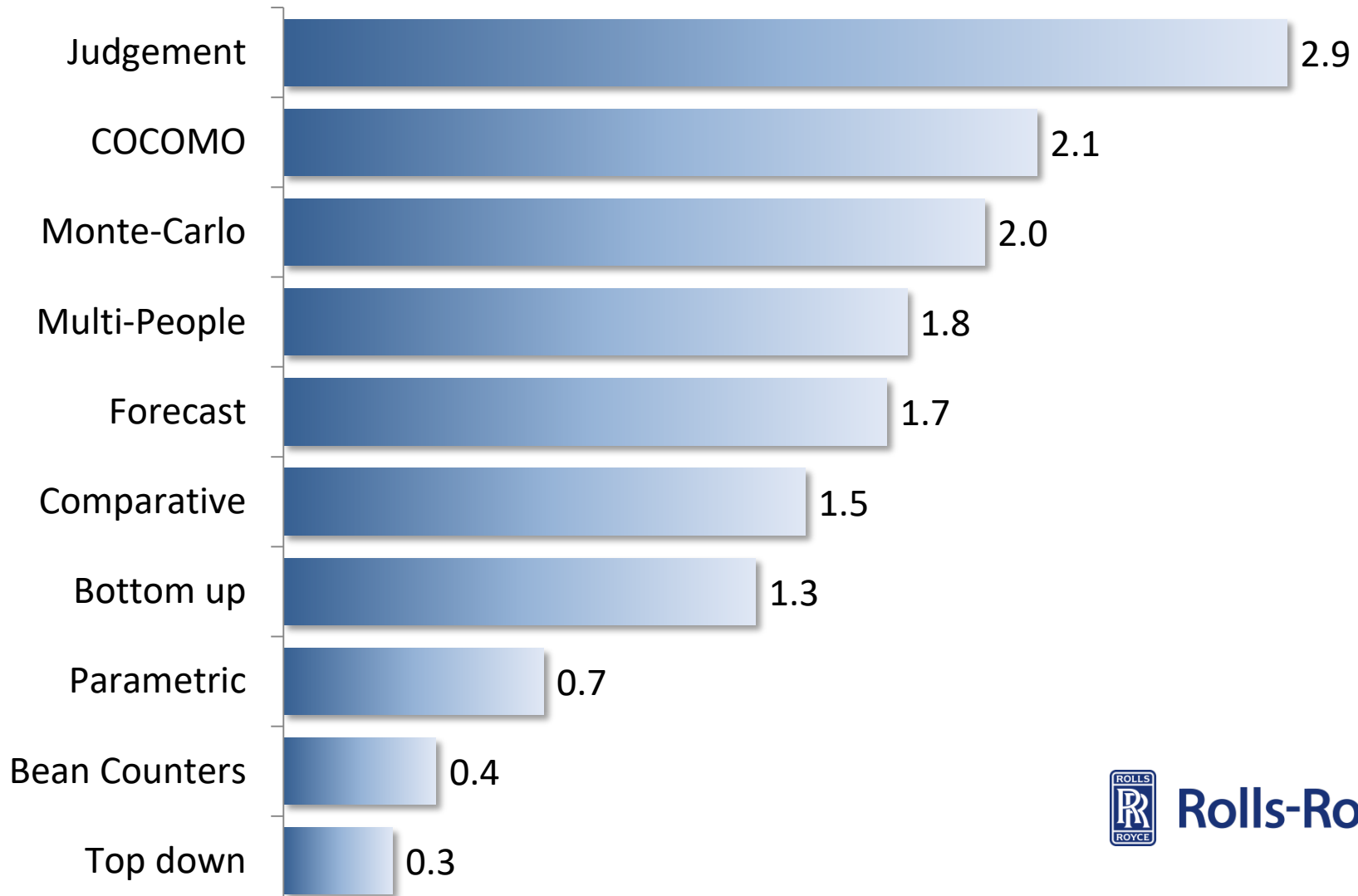


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The Correlation Between Technique & Estimate Accuracy

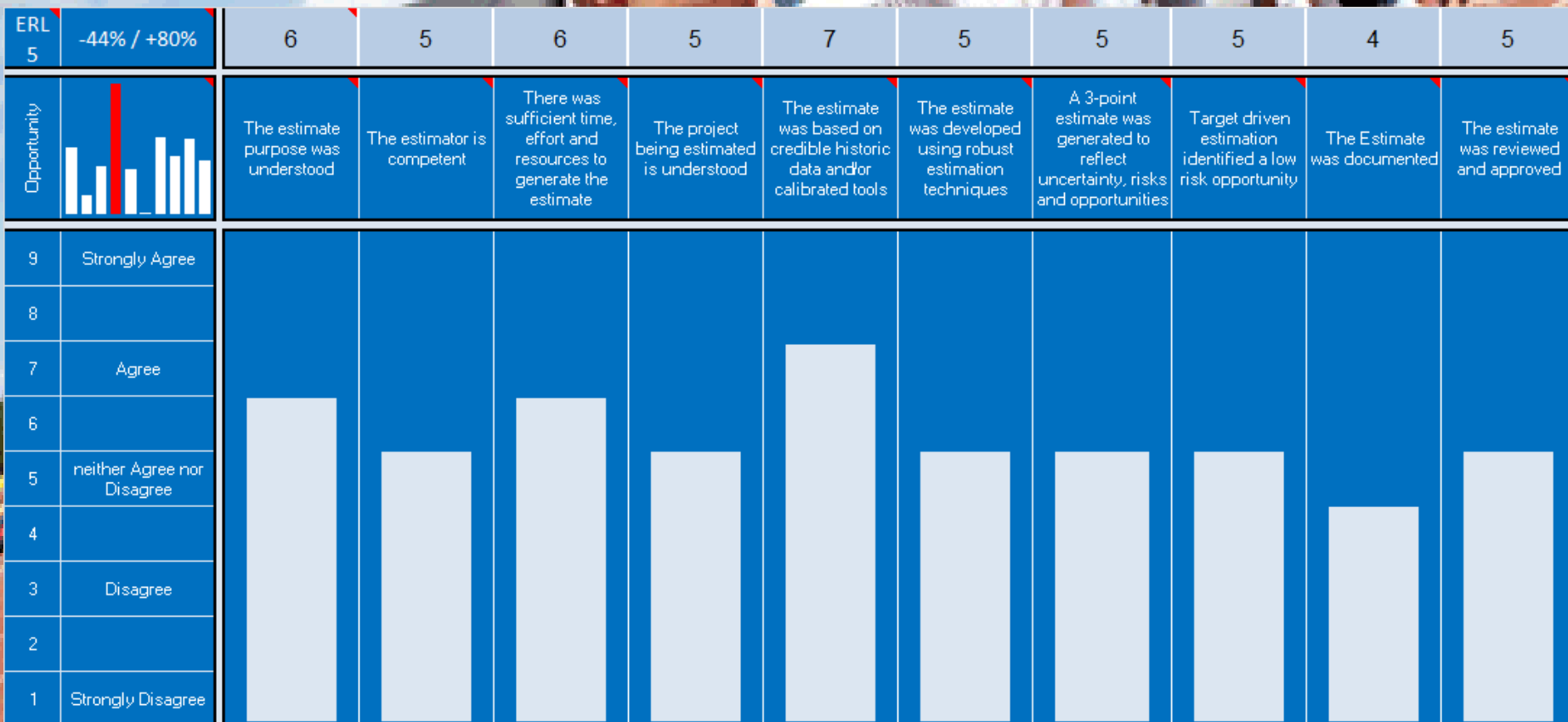
21

ERL Points Eared



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The ERL Assessment



What happens if you can't make the grade?

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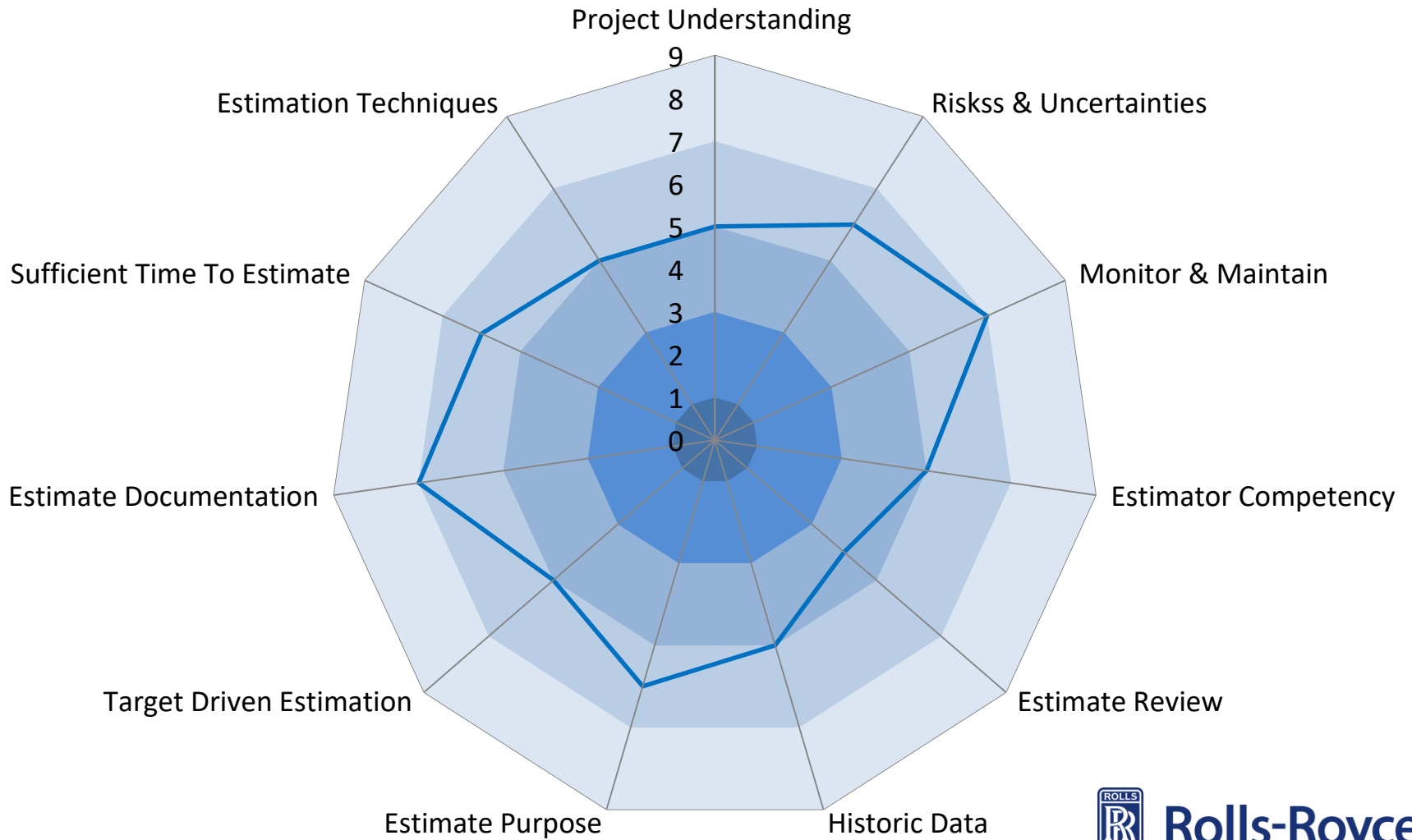
- Very good
- Good
- Average
- Poor

If the estimate falls short of the required ERL then further work is required. The ERL checklist has a feature to guide the estimator where to invest further rigour. If after additional work, the required ERL cannot be achieved then the customer of the estimate must be made aware of the risks inherent in the estimate they receive.



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Benchmark the business.



It may not be possible to prevent a bad estimate, but it is possible to prevent it from being a surprise.



ERL is simple enough for most managers to understand

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Estimation brings benefits!

Benefits Reported From Estimation

% of population who reported the benefit

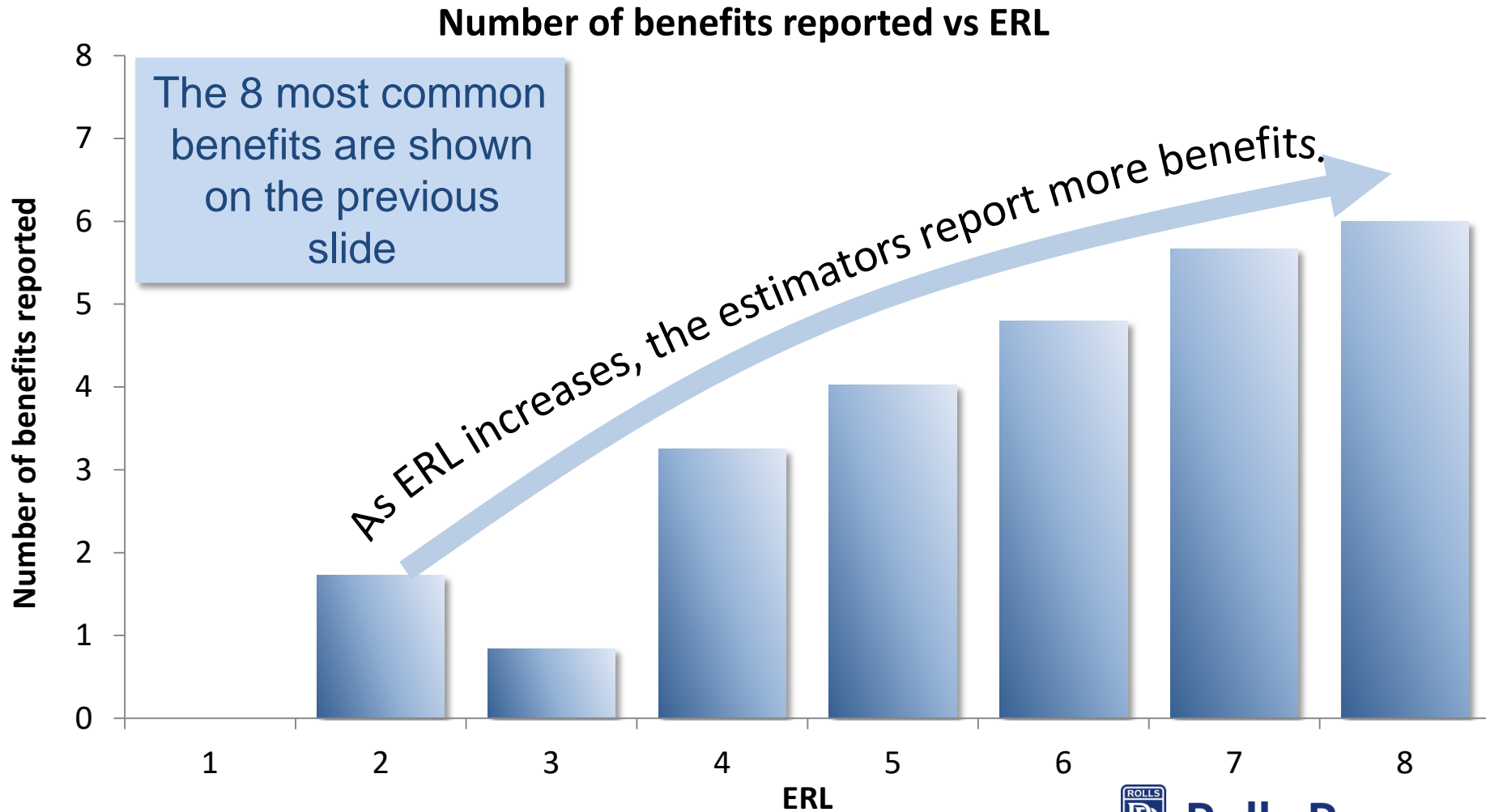


The 8 most commonly reported benefits from estimation



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ERL vs number of benefits reported



- Estimate accuracy is no accident.
- Maturity is analogue not binary.
- ERL is easy to score and communicate.
- Higher ERL scores bring additional benefits
- Bad estimates should no longer be a surprise!



Any questions?

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