

Biennial Convention 2007

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Institute of Actuaries of Australia



Strategic Risk Management: Mapping the commanding heights and hazards

Andrew Gale and Anthony Asher



“the causes of most financial crises are often rooted in strategic rather than operational decisions. All strategic decisions entail risk and yet strategic risk is not measured and managed with rigor”

William Parrett and Frank Kolhatker

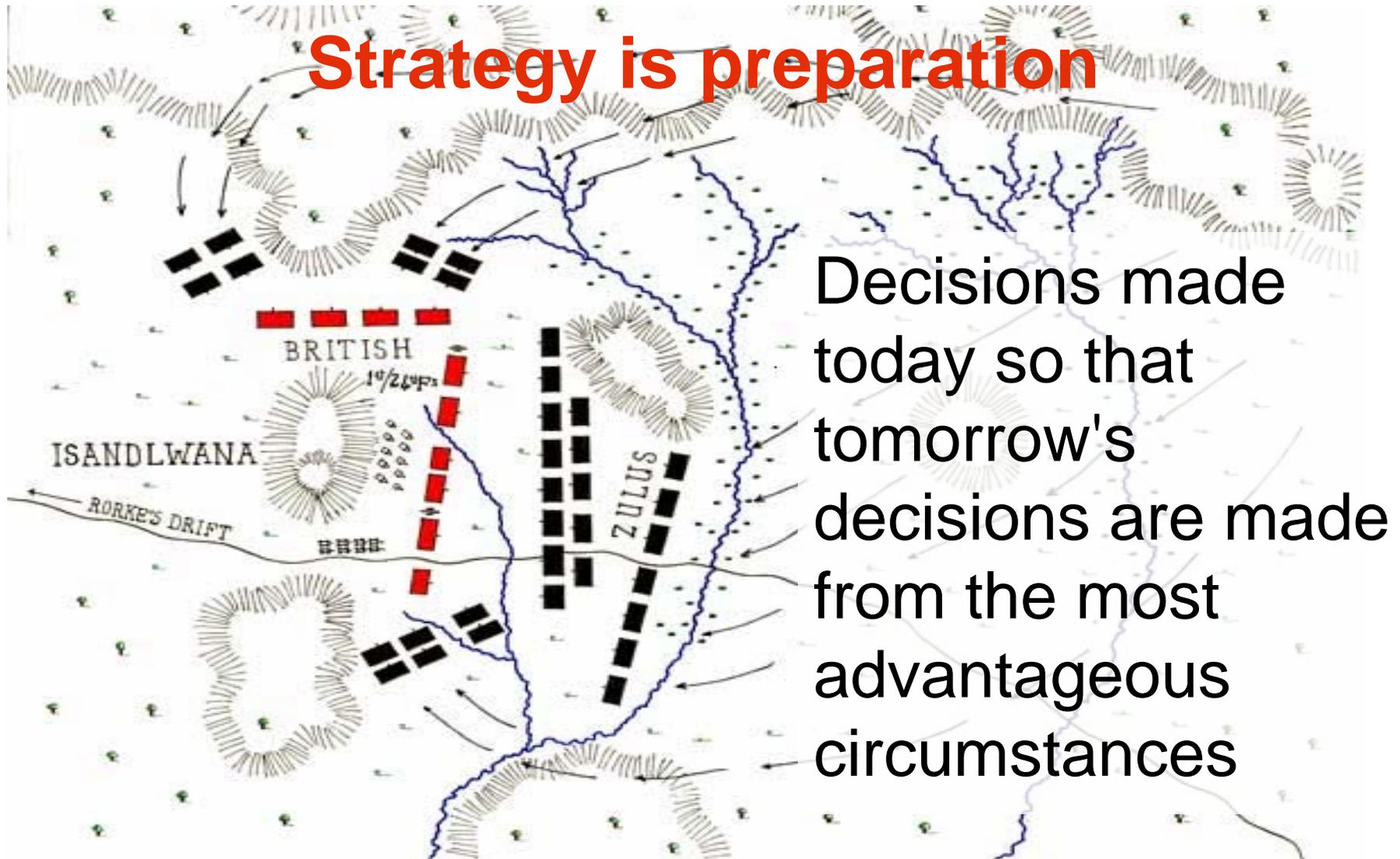


Agenda

- Strategy is preparation
- Appraisal value approximates strategic value
- Strategic risks are crucial
- Developing scenarios
- Delphi techniques
- Real Options Analysis
- The business plan



Strategy is preparation



Decisions made today so that tomorrow's decisions are made from the most advantageous circumstances



Strategy is preparation

- Michael Porter - Market position
 - 4 P's: product, price, place, promotion
 - Brand and reputation
 - Established market relationships
- Mehrdad Baghai - Granularity of markets
 - Momentum of segment: 2/3rds of firm growth
 - Mergers and Acquisitions: 1/3rd of growth
 - Weighted average market share: very little

Strategy
requires
conscious
choices

It entails risk



Strategy is preparation

- Hamel and Prahalad:
Core competencies?
 - Organizational structure
 - Formalised but not fossilised structures
 - Defined processes and standard costs (six sigma)
 - People policies
 - Feedback, remuneration
 - Information management
 - Granularity of accounts (fixed variable)
 - Experience investigations

Strategy
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It entails risk



Strategy is preparation

- Computer systems
 - If data worth keeping, worth keeping accurately
 - Information should be in one place
 - If data cleaned, correct the original source
 - Error correction is BaU
 - Documentation is not a spontaneous process
 - Legacy systems are the consequence of inadequate strategic thinking.

Strategy
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It entails risk



Appraisal value approximates strategic value

- Intellectual capital results from strategy

“Internal structure includes the organizational structure, legal parameters, manual systems, research and development, and software of a company. External structure includes brands, and customer and supplier relationships. Employee competence includes education and training of the professional staff that are the principal generators of revenue” Guthrie and Petty (2000)



AV approximates strategic value

- Intangibles and appraisal values
 - Embedded value: value of customer relationships
 - Appraisal value: value of brand and distribution
- AV is close approximation to market

	Market value/ Reported embedded value				Market value/ Reported appraisal value			
	Nov 2001	Oct 2002	Dec 2003	Feb 2005	Nov 2001	Oct 2002	Dec 2003	Feb 2005
CGNU	1.51	1.28	1.22	1.39	0.80	0.96	0.94	1.14
L&G	1.45	1.34	1.23	1.24	0.91	1.04	1.00	0.92
Pru UK	1.97	1.52	1.70	1.45	0.89	0.90	1.02	1.01
Aegon	1.98	1.19	1.17	0.91	0.72	0.82	1.05	0.87
AXA	1.73	1.57	1.58	1.30	0.86	0.88	1.15	0.88
ING	1.68	1.40	1.42	1.50	1.04	0.92	1.26	1.04

Source: Zacheis (2005) Morgan Stanley



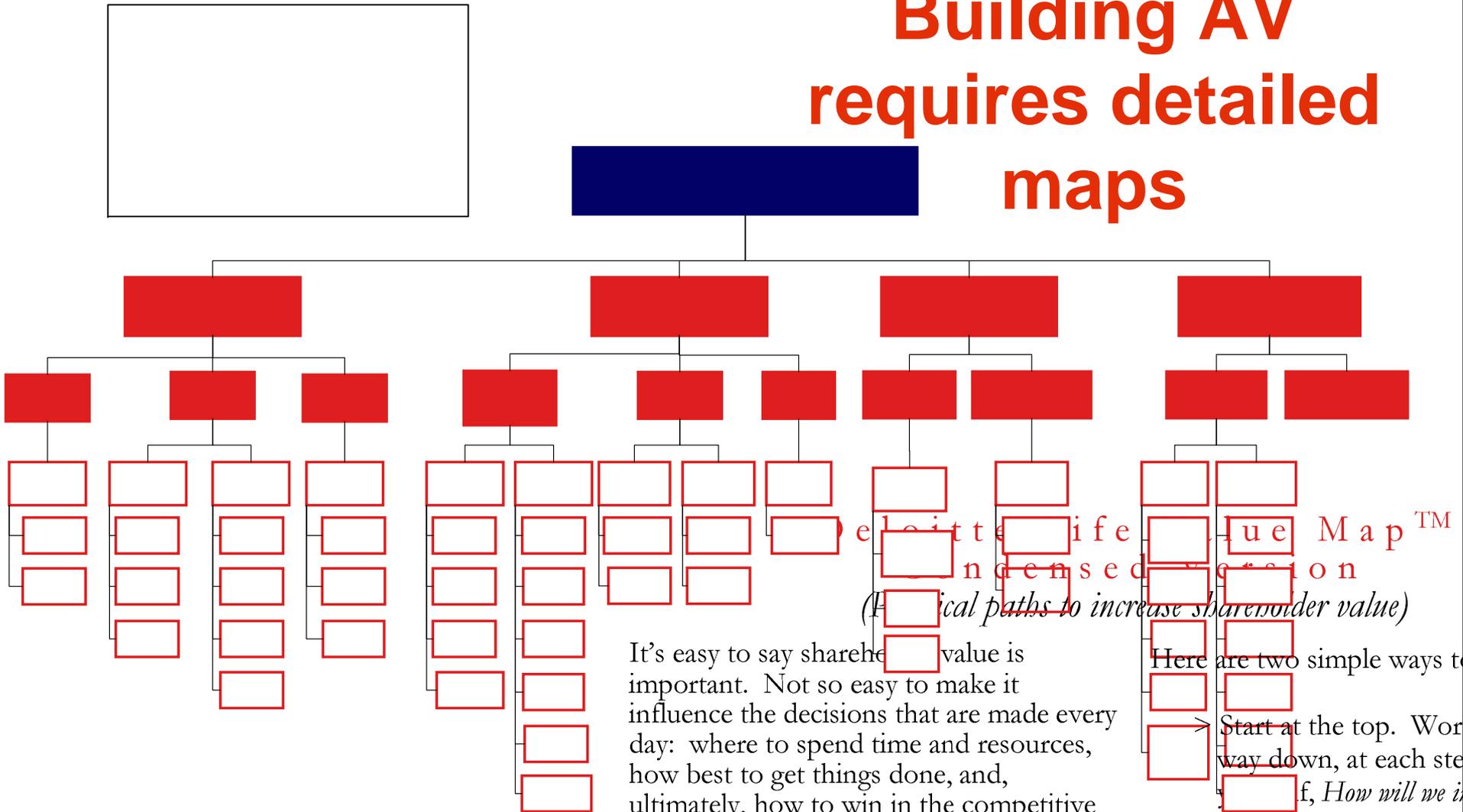
Analysis of change in AV gives insight into value creation or destruction

- The analysis of change in AV
 - A comparison of experience with assumptions
 - A reconciliation of data
 - Disclosure of changes to assumptions

	Beginning of period	Unwinding of discount	Other income	Outflows	End of period	Year end changes	After changes
Actual experience from the accounts							
Assets	10000	30	1525	-1350	10205	0	10205
Liabilities	9000	20	1480	-1340	9160	100	9260
Surplus	1000	10	45	-10	1045	-100	945
Expected experience from the valuation model ...							
Analysis of surplus ...							
Shaded areas are income statement items that represent the build up of assets and liabilities.							



Building AV requires detailed maps



Deloitte Life Value Map™
 Condensed Presentation
 (Historical paths to increase shareholder value)

It's easy to say shareholder value is important. Not so easy to make it influence the decisions that are made every day: where to spend time and resources, how best to get things done, and, ultimately, how to win in the competitive marketplace.

Here are two simple ways to...
 Start at the top. Work your way down, at each step ask, "How will we increase value?" This will help ensure that your tactics support your overall strategy.

This Map is designed to accelerate the



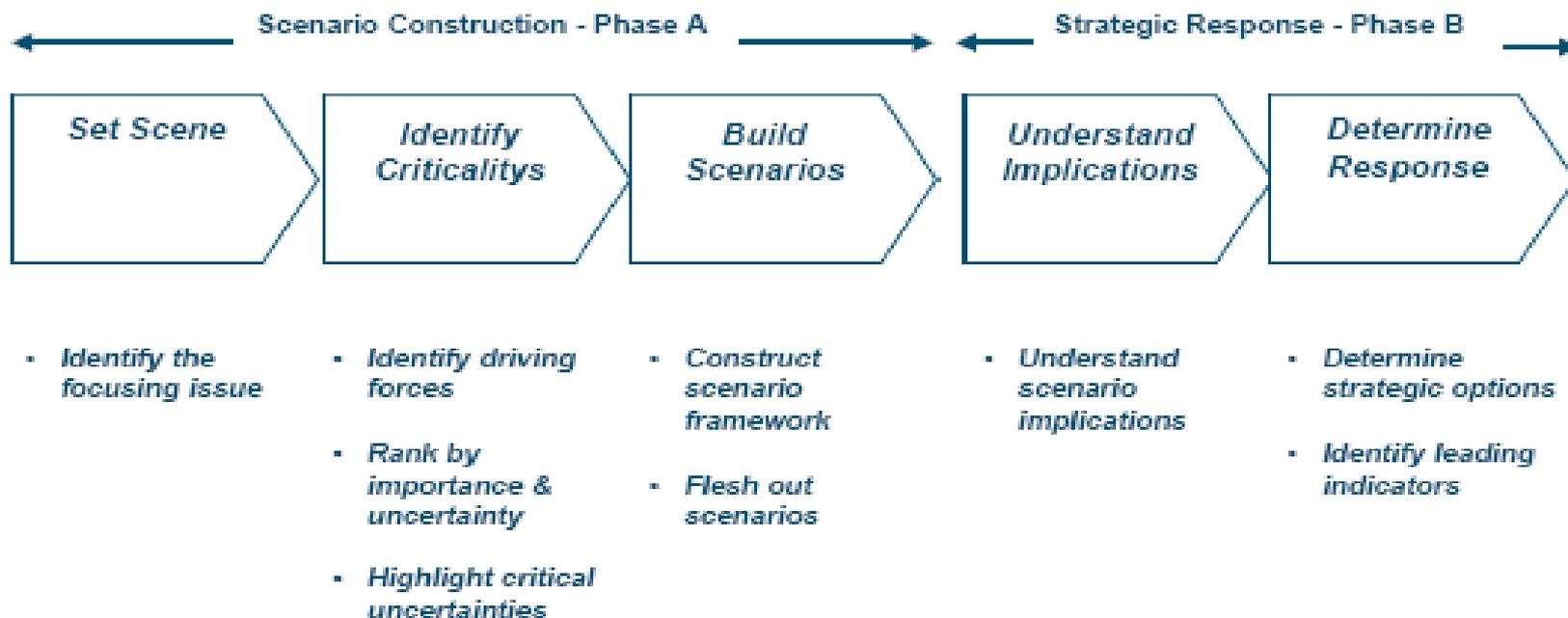


Strategic risks are crucial

- MECE: mutually exclusive, comprehensively exhaustive
 - Balance sheet and market risks
 - Insurance risks
 - Expense risks
 - All relative to expected
- Strategic risks are risks to intangible assets
- Strategic gambles are risks to everything



Scenario development



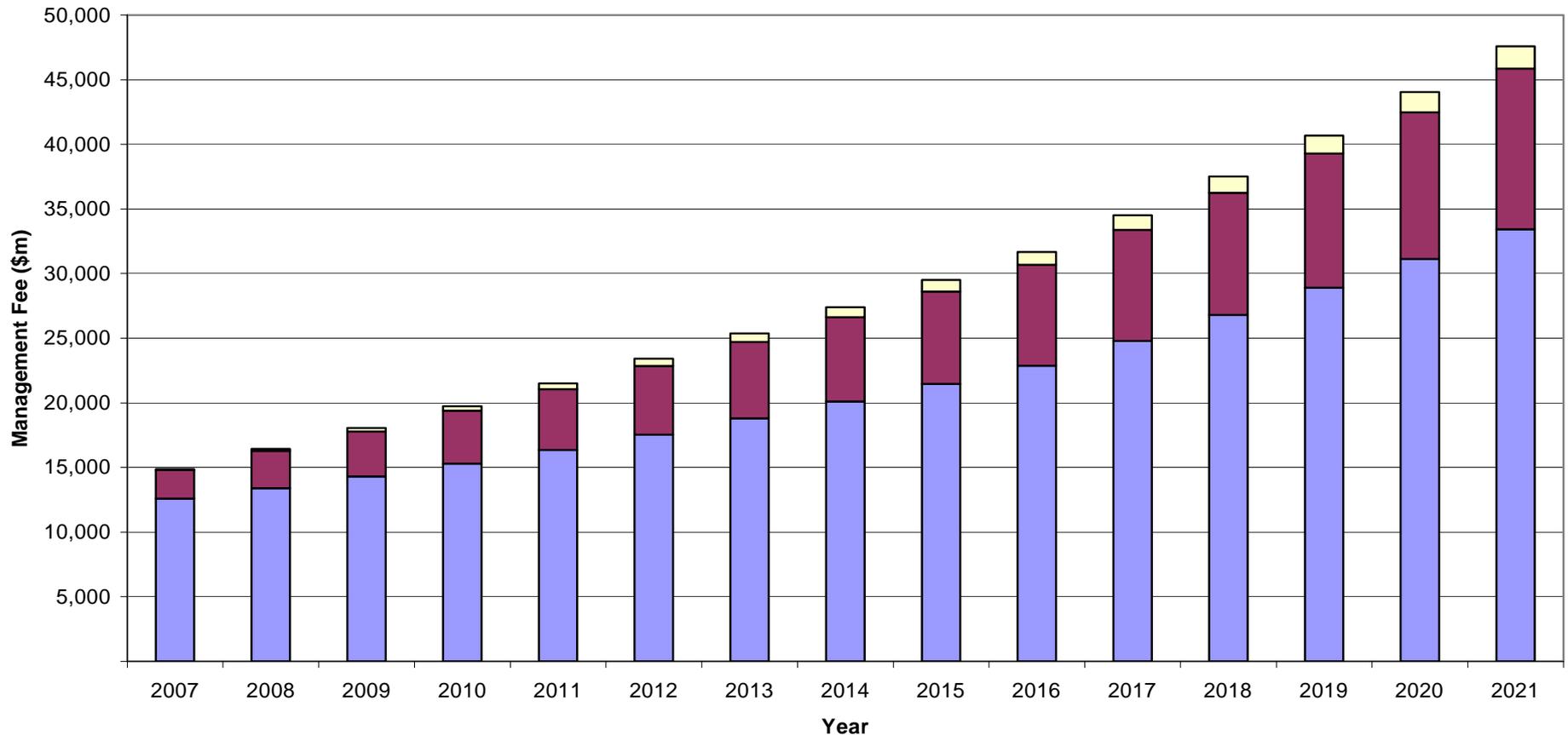
“WHAT MIGHT THIS FUTURE LOOK LIKE?”

“HOW DO WE RESPOND?”



Scenario development example

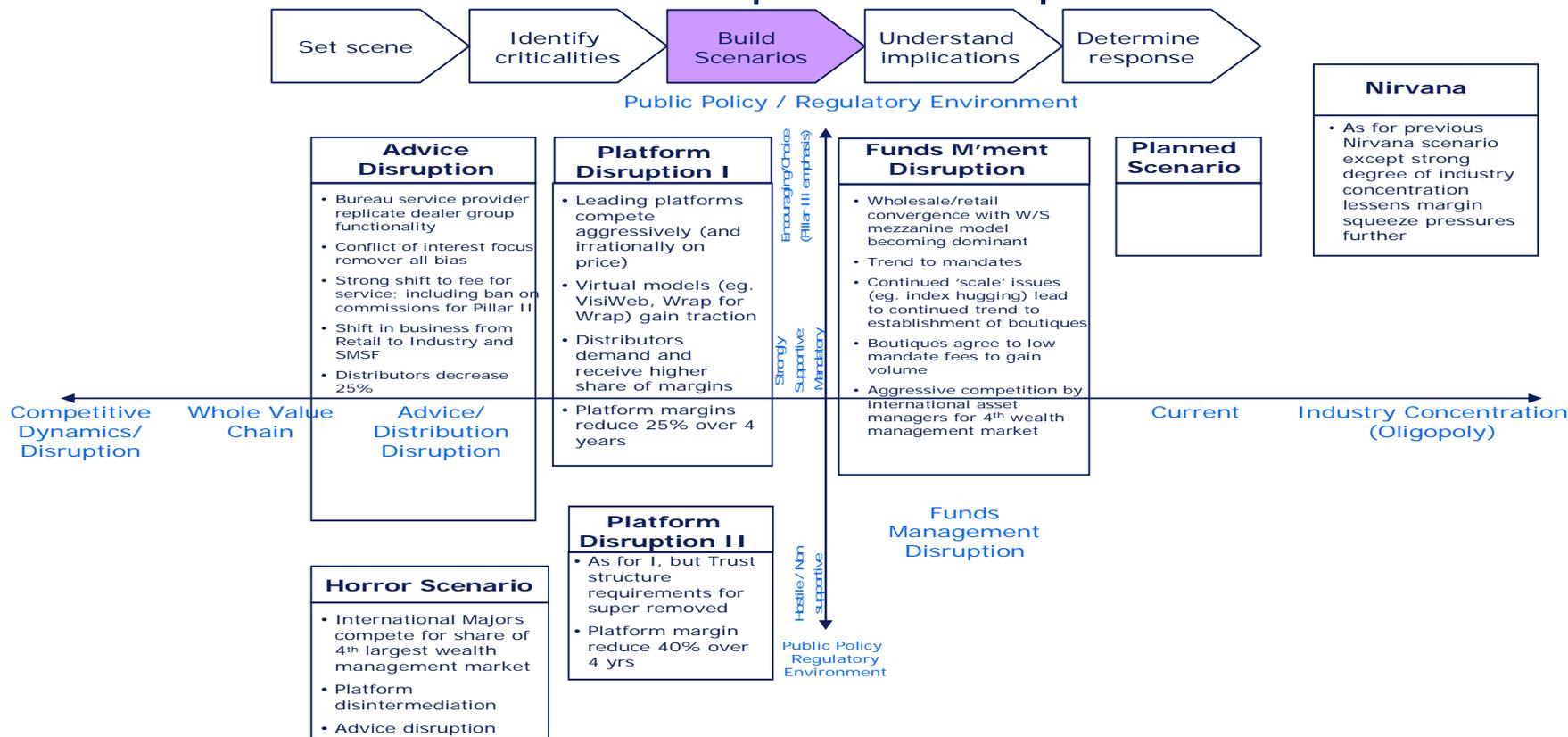
Management Fees Pre and Post Retirement (Run42)





Scenario development example

Key uncertainties then define possible future states/Scenarios...
 Scenario Basis 2 relates to competitive disruption





Scenario development

- Challenging conventional thinking
- Identifying potential changes ahead of time
- Identifying and assessing real options
- Encouraging cross-divisional conversations about strategic choices and options



Delphi techniques

- Where the problem does not lend itself to precise analytical techniques, but where input from experts can be valuable
- More individuals are needed than can interact face-to-face
- Where it is important to have anonymity between experts, in order to reduce bias
- Where the choice of experts is sufficiently heterogeneous to avoid a consensus forming too early



Real Options Analysis

- The measurement of value in times of high uncertainty
- The recognition of the value inherent in management's ability to respond to the unwinding of uncertainty over time
- The sometimes counterintuitive way of thinking about value when the financial outcomes of uncertainty are non-linear'



The opportunities for actuaries

- Strategy requires conscious choices: it entails risk
- Strategy is more than risk management
 - Strategy is preparation for value
 - Strategic risks can be more important than market, insurance, operational and expense risks
- Actuaries are expert at making risk explicit
 - Our appraisal values evaluate intangibles
 - Our projection techniques explore the future
 - We can quantify risk appetite
- The future is ours - if we think strategically