

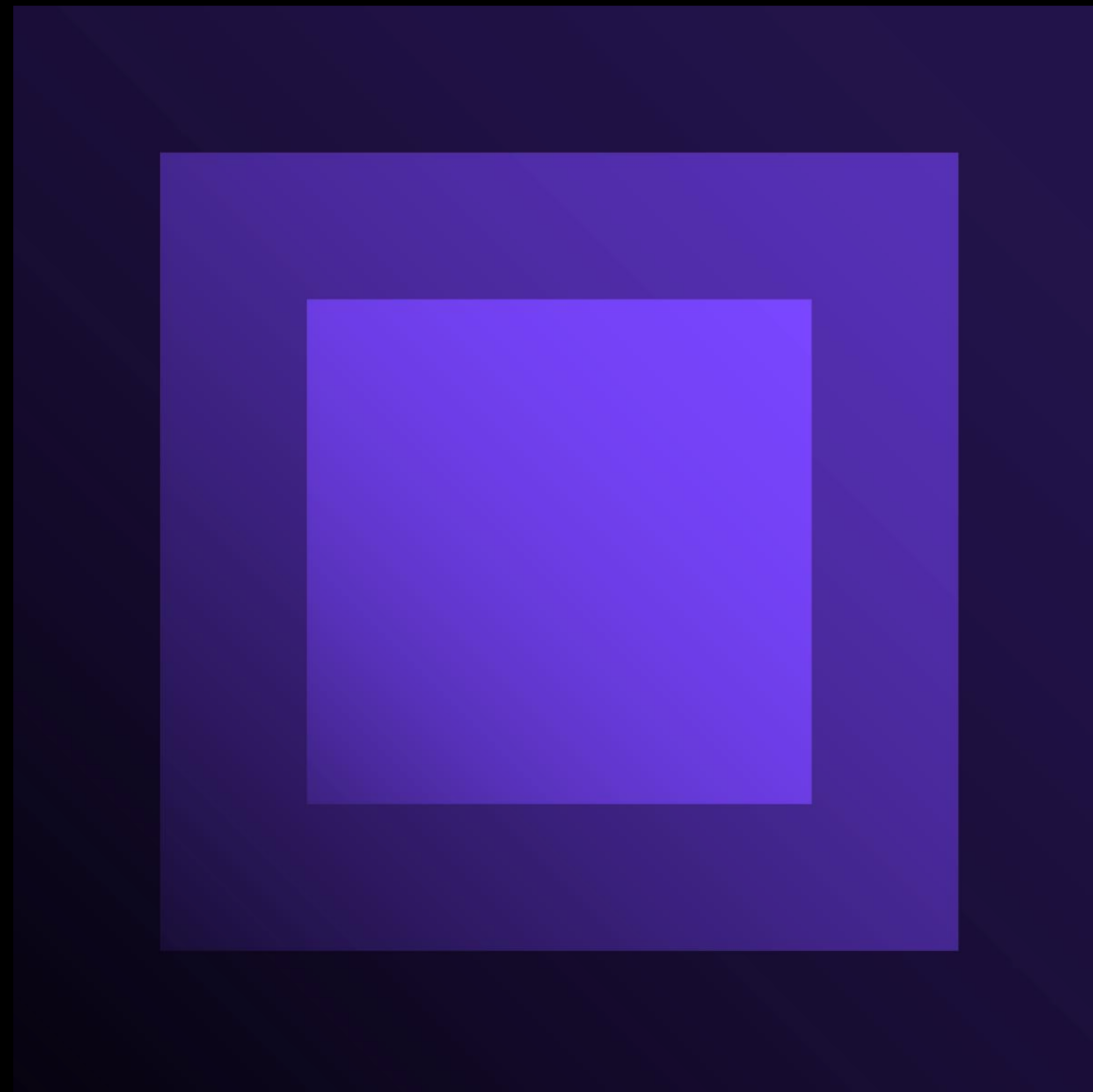


The TPA gateway project

Discussion Slides to support
*“TPA: A Practical Guide to
Navigating the Transition”*

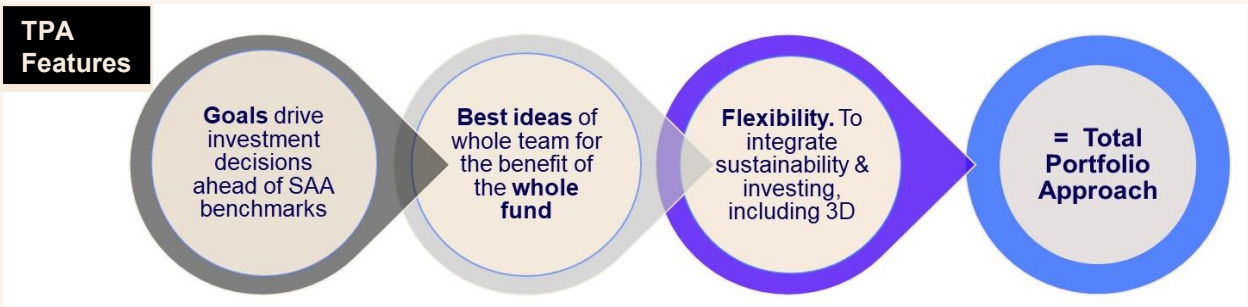
July 2026 | An RPC Research Study

Roger Urwin & Genevieve Hayman



The TPA Gateway Project. The Outline

The working title	The TPA gateway. How total portfolio approaches offer certain opportunities subject to certain dependencies in multi-asset performance and ‘sustainability’ = <i>Long-term investing that is intergenerationally efficient, fair and systemically resilient</i>
Research method	A study drawing on a series of interviews with key investment industry experts to help develop the thinking and action of the industry and guide the CFA Institute in its priorities.
Target readership	The target readership of the study is industry leadership engaged in strategic, macro and sustainability challenges and industry practitioners wanting to deepen their understanding of the field.
The multi-asset framework	The project goal is to provide arresting and actionable thought leadership to guide investment industry thinking on TPA practice, particularly for asset owners with multi-asset portfolios but also for investment managers and providers
Sustainability challenges	In this study we note the tidal wave of societal change in which finance is part of the whole ecosystem we inhabit. The industry must accordingly embrace complexity; make simplicity possible; major on substance over slogans and joined-upness over insularity
Systems thinking and leadership	We take a systems leadership position in this research by engaging leaders in framing the collective challenge, deep thinking about the multiple factors that govern the possible futures and co-creating the solutions that are most likely to deliver greater good outcomes.



The SAA-TPA Spectrum		
		
Performance assessed vs:	Benchmarks	Fund goals
Success measured by:	Relative value added	Total fund return
Opportunities defined by:	Asset classes	Contribution to total portfolio outcome
Diversification principally via:	Asset classes / sub asset-classes	Risk factors
Asset allocation determined by:	Board-centric process	CIO-centric process
Frequency of change:	Infrequent, calendar based	Continuous, real time
Portfolio implemented by:	Multiple competing asset class teams	One team collaborating together



Better decision framing



Better decision making



Better dynamism

Research Participants – Across AOs, AMs & Providers

Will Goodwin – NZ Super

Stuart Dunbar – Baillie Gifford

Jeremy Baskin, Dimitris Melas – MSCI

Jacky Lee – HOOPP

Michael Kurz – MN

Gustavo Gomberg – Future Fund

Stephen Gilmore – CalPERS

Johanna Kyrkland – Schroders

Jessica Oleson, Ziad Hindo – Bridgewater

Jeroen Rijk – PGGM

Lindsey Matthews – USS

Jaap van Dam – formerly PGGM

Common themes

- TPA knowledge has advanced substantially. These 1-2-1 discussions had very substantial depth
- There is increasing systems-savvy among TPA experts and TPA discussions were clearer when systems thinking was present
- The TPA ‘mindset’ is a strong factor in this group, but with certain differences
- The benefits of TPA as a lens and a structural exposure to factors and themes came up a lot (TPA helps answer the listed equity concentration quandary)
- Technology is nowhere like where this group want it to be. The intelligence stack has a long way to travel

Notable differences

- The group has various versions of investment theory implicit in their beliefs. Some of the group were adherents to MPT tenets; some were thinking in Risk 2.0 terms
- Resilience is a big factor in some of this group’s mindset, but is not well-defined
- Most of the group, but not all, see TPA through a ‘soft’ lens – that culture, governance and hard-to-quantify factors are highly significant

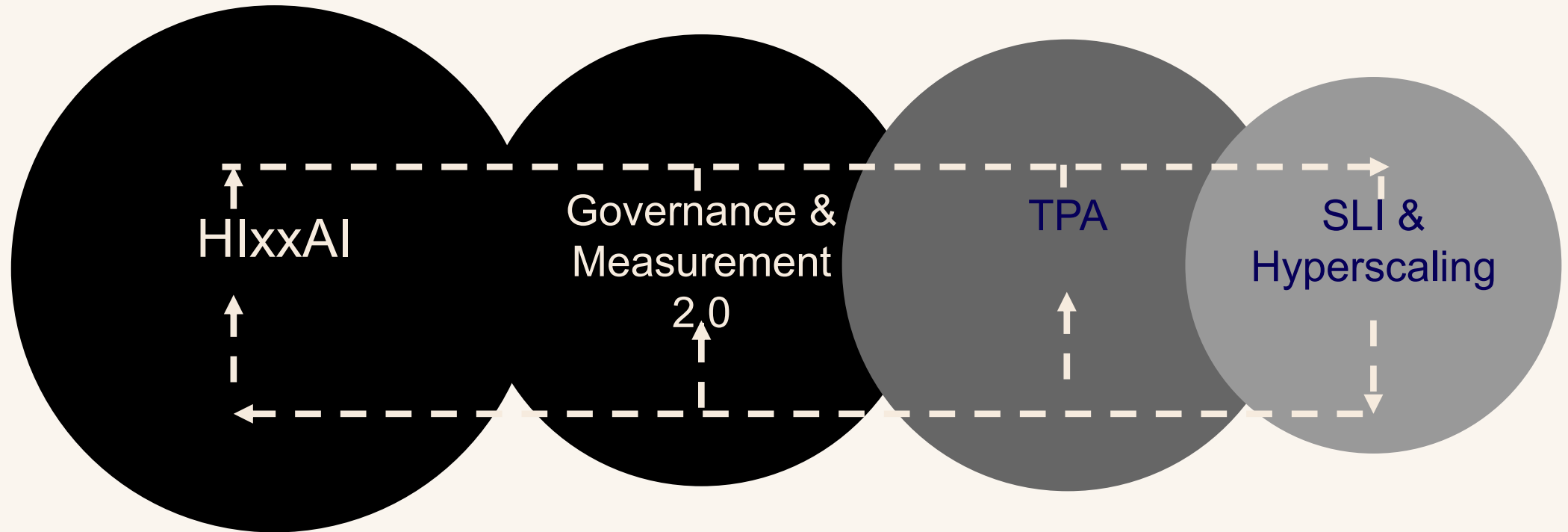
The TPA Gateway – Chapter Headings

TPA as a test of organisational maturity

- 1. Introduction. Research methodology**
 - 2. The Pillars: Investment, Governance, Risk, Sustainability, Technology**
 - 3. The Practical Considerations of Transitioning**
 - 4. Survey Results from AO and AM participants**
 - 5. The People Pillar: Mindset and Culture**
 - 6. Conclusions**
- Appendix: Literature Review. Timeline. Resources**

TPA as the central element in the investment organisation methodology

Enabled by the HlxxAI operating system



Inputs: Professionalism → Superteams → Org-Alpha → Navigation →

Outputs: Portfolio Alpha → System-Alpha →

Outcomes: Resilience → Portfolio Long-Term Alpha → Society & Planet-Alpha

Overview

Total Portfolio Approach – What is it?

Solving for a better investment philosophy, methodology and system, and performance?

What it
is

Alignment to goals

Best ideas

Dynamism

What it
isn't

Plug and play

Substitute for skill

TAA

What it
contains

**Opportunities outside
asset classes**

**Private Markets -
integrated**

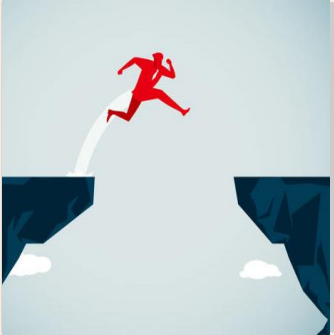
Factors and themes

Long-term ideas

Resilience

**Sustainability and
system-level investing**

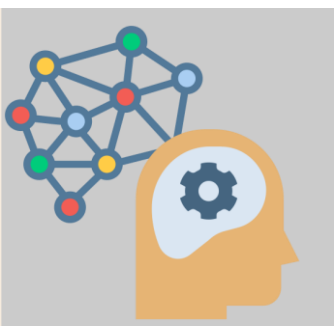
Three big things from the research



TPA crossed the chasm in 2025 – it bridged the gap between early adopters and mainstream acceptance. It was slow to get to this point. Like other tipping points, this was a transition that we could know would happen – it ticked all the boxes - **data, theory, story, practice**; but we could not know when. But it seemed to tip because of the parallel challenges from systemic risk uncertainty, public private market integration, and AI/ML disruption

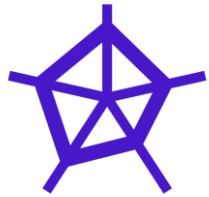


The rise and rise of **resilience**. Investors are increasingly conscious of the dangers of focusing risk thinking on the current portfolio given this only directly addresses **current volatility**. We need more understanding and management of **through-time risk**. **Resilience** is the essential bridge to deal with this; and the dynamism and adaptability of TPA is an open gateway to manage it better via anticipating, absorbing and adapting to factors, themes and shocks

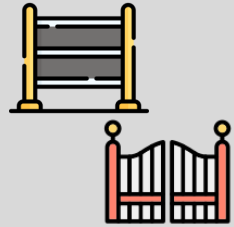


The industry has a growing **cadre of systems thinkers** that are increasingly skilled with **sense-making and systems-navigating** in a world that is increasingly volatile and uncertain and in organisations that are increasingly complex, ambiguous and adaptive. These professionals are often unsung and misunderstood but are crucial influencers of our industry and organisations going forward in their T-shaped capacity to bridge verticals & horizontals

Three big TPA features



The TPA system deals particularly well with **private markets**: helps break down the artificial public/private silo; joined-up liquidity management; managing factor exposures through overlay; not forced into rebalancing over-rides; works best within a macro factor model of cash flows, growth, discount rates; better partnering with mega private shops

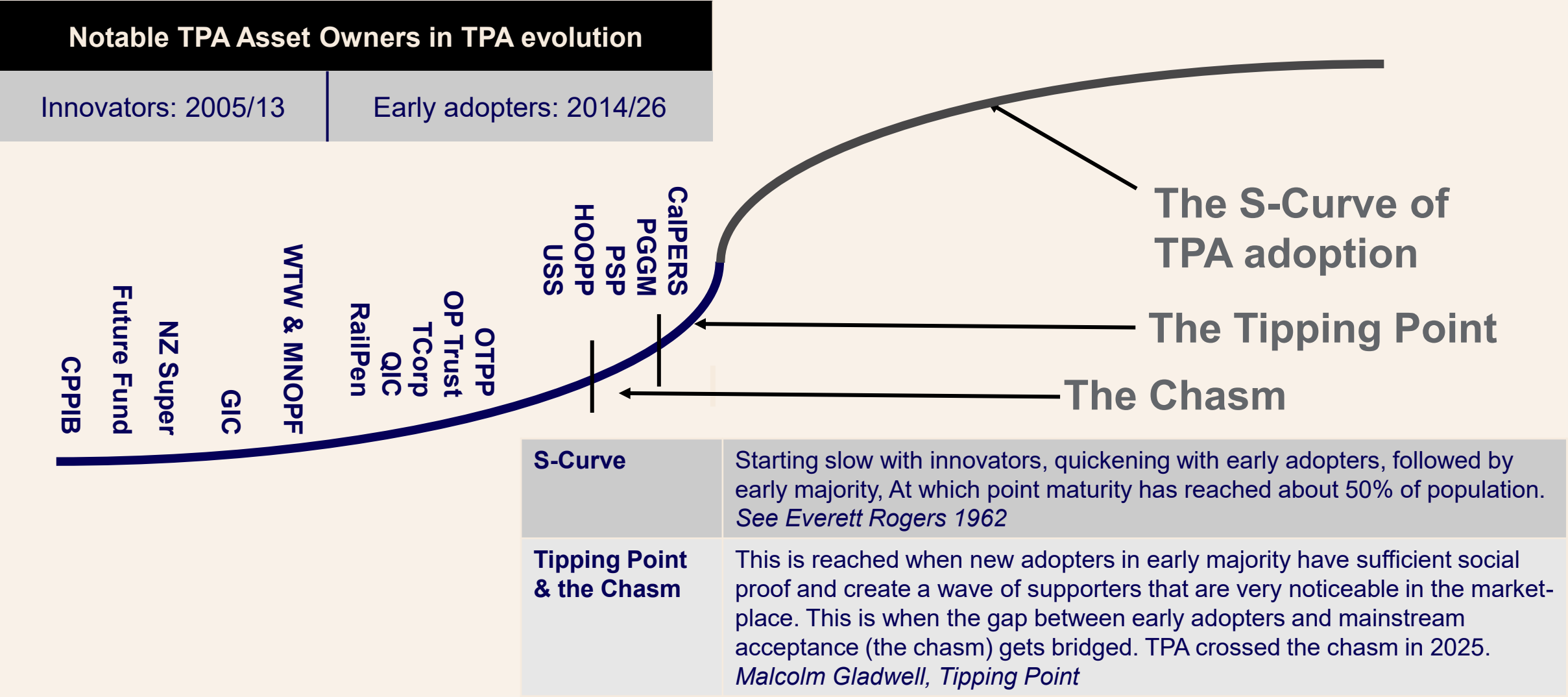


Multiple **guardrails**. TPA has stronger delegations dialled in. Better measurement accuracy. Stronger macro foresight disciplines and scenario scanning.
Multiple **gateways**. More accuracy near-term, long-term. Better sustainability - portfolio-level, system-level. More balance sheet capture.



Six **portfolio features** of TPA – assets outside traditional asset classes; factor and theme exposures; joined-up private market assets; greater dynamism in tilting; greater resilience in exposure to macro risk factors like growth and liquidity; sustainability and real-world impact – allocation and stewardship

Who is doing TPA? A timeline.



What TPA is and isn't. What TPA does and doesn't do.

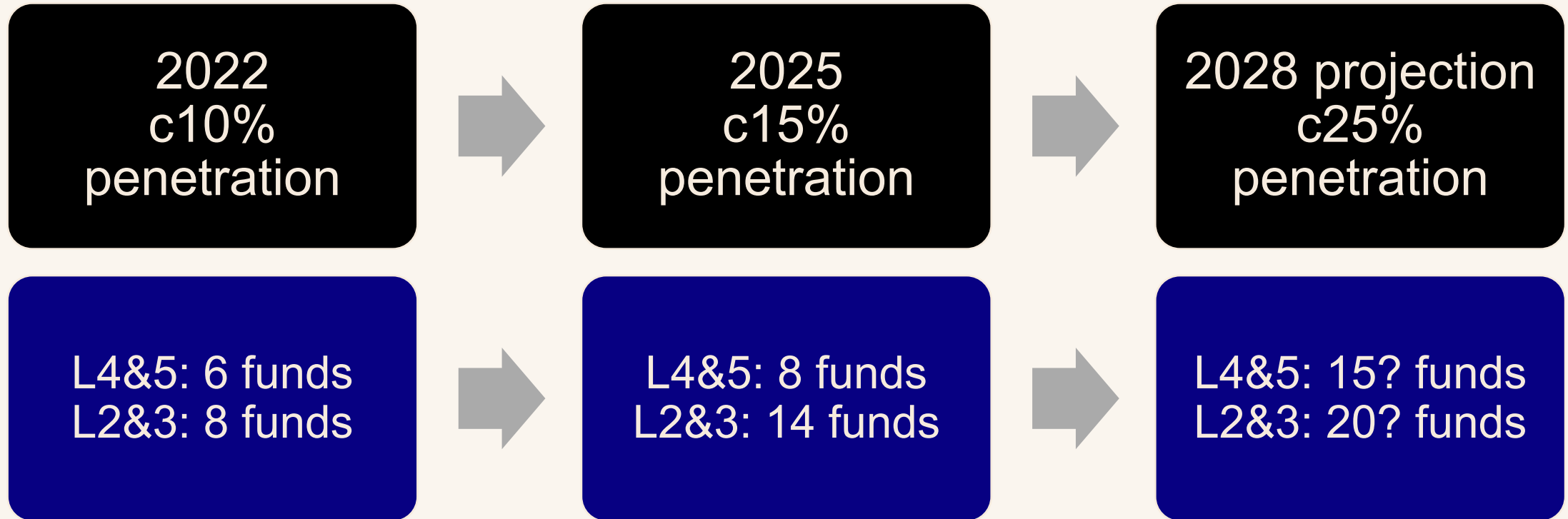
What TPA is	Goals for risk and return drive investment decisions ahead of SAA benchmarks	What TPA isn't	TPA unlike the SAA system is not a benchmark construct, it is a multiple comparator construct
Best ideas of whole team for the benefit of the whole fund in a competition for capital	Dynamic. To be flexible in new conditions adapting to pricing, regime & sustainability factors	TPA is not an investment strategy and TPA portfolios can diverge widely	TPA is not a plug and play idea, the transition to TPA is difficult and arduous
What TPA does	TPA is able to streamline governance and culture and internal integration	What TPA doesn't do	TPA does not transform an unskilful investment team to a skilful one
TPA is a gateway to new ideas – 3D investing, alternatives, Risk 2.0, the KPI/KRI constructs	TPA increases the value of internalisation particularly in supporting increased engagement	TPA cannot be effective without a strong data platform with excellent scope, access, speed	TPA unlike SAA does not produce one success measure, it uses multiple comparators

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Large fund TPA adoption

AO100 (Funds above c\$100B). Thinking Ahead fund-by-fund analysis



All estimates are at 1 January

Levels 0 & 1 = SAA \ Levels 273 Hybrid TPA | Levels 4 & 5 Full TPA

Source of rubric: Thinking Ahead

People. The TPA Mindset



Total portfolio focus



- different way of thinking – singular goals process
- holistic & systemic focus through one-org
- joined-upness with collaboration vs competition
- scorecards/dashboards bring focus to goals
- systemic risk takes an integrated position
- diversity beats diversification

Culture



- professionalism and accountability
- ethical and fiduciary responsibility
- contributions to teamwork strongly valued
- T-shaped and joined-up working is valued
- incentives like comp can help or hinder
- safe and sane environment with one-org flow

Resilience



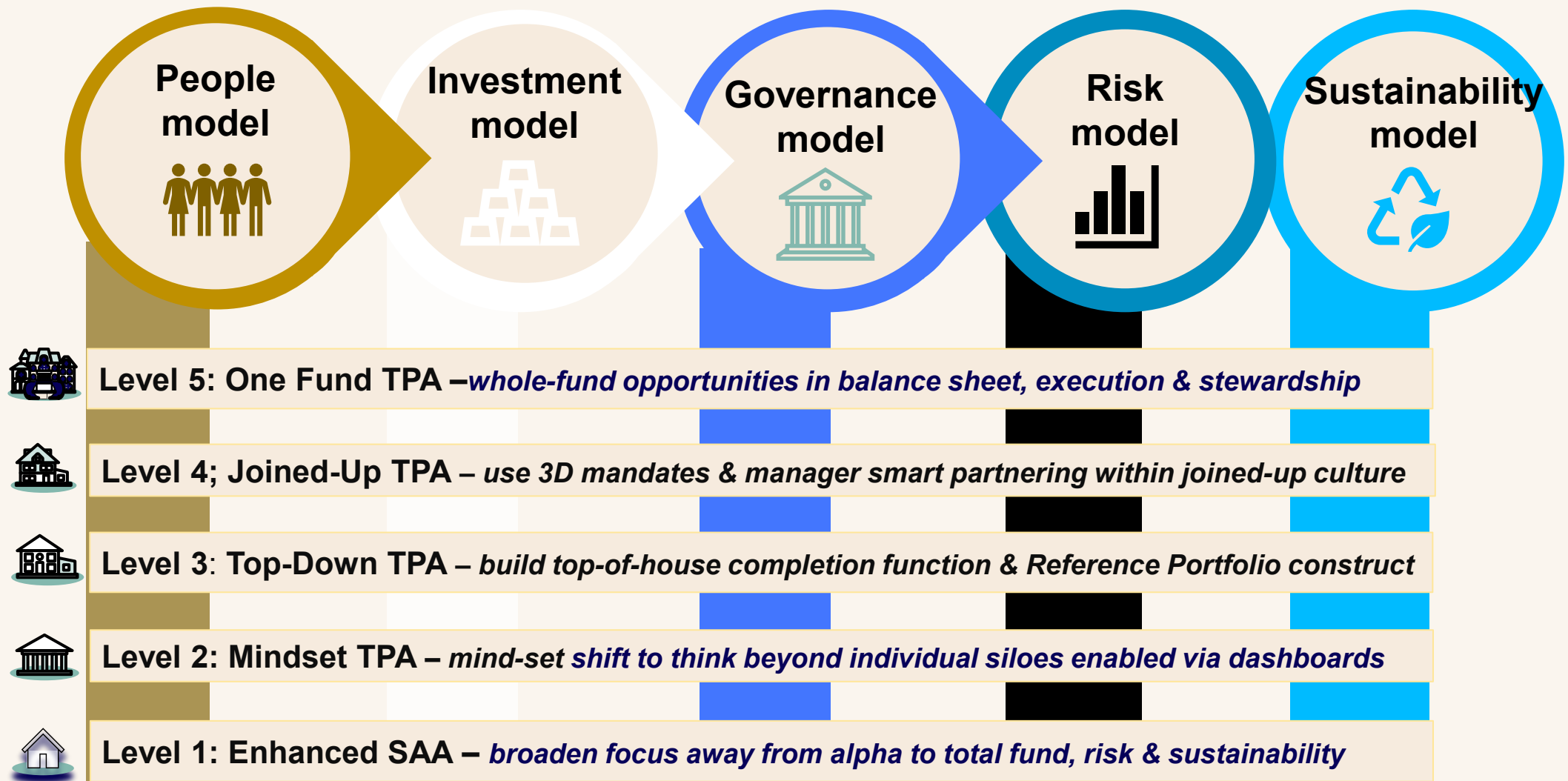
- different way of thinking – future back process
- organisational and portfolio positioning in respect of future threats
- hence integration beats optimisation
- puts strategic foresight in the spotlight
- wider diversity funnel, narrower outcome cone

Skill



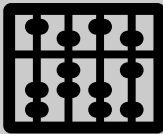
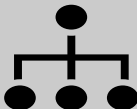
- org-alpha – capacity to add value
- competition for capital highly focused
- internal attractive vs external mandates
- investment philosophy sees opportunities in well-judged trade-offs
- wider scope – factors and themes

TPA in numbers (1). The five pillars and five levels



TPA simplified, standardised, codified. The 4 big steps and 16 other steps

Ticking off these steps is critical to maturing the TPA factors. Each is a destination in its own right

The four big steps		
	TPA mindset and culture.	Adopting a one-fund and one-organisation mind-set in which the culture and incentives are fully aligned to total portfolio goals
	Dashboard-driven system of measurement	To check-in on progress and adapt the portfolio to any relevant new thinking, circumstances or investment conditions.
	Board-owned reference portfolio	Typically expressed as a simple equity - bond mix that encodes risk appetite and the fund's total cost of capital rather than serving as a benchmark
	Top-of-house total portfolio management function	A CIO/CTPO role and function doing overlays, rebalancing, liquidity management, and balance-sheet actions within agreed guardrails
		* CTPO ~ Chief Total Portfolio Officer

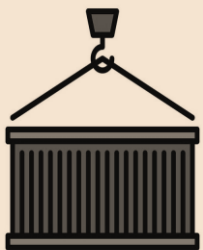
The full list of steps		
Enhanced SAA Level 1	1. TPA mindset and culture– TP goals ahead of benchmarks 2. Team KPIs – tracking team results vs goals 3. Multiple comparators – multi-faceted progress data 4. ESG integration -- sustainability across whole fund	
Mind-Set TPA Level 2	5. Dashboards – PQD/KRIs. Real-time consolidated data 6. Dynamism – high activity & conviction investing style 7. Illiquidity management – total portfolio vulnerability 8. Delegation – board and IC positioning in decisions matrix	
Top-Down TPA Level 3	9. Top-of-house function – overlays, balance sheet, TP risk 10. Reference Portfolio – expression of risk in lean portfolio 11. Three-body construct – alignment of RP, SP and TP 12. Resilience - left-tail and drawdown strategies & measurements	
Joined-Up TPA Level 4	13. 3D mandates – widened to encompass multiple goals 14. Thematic investing – further diversification and edge 15. Smart partnering – engaging with outside managers 16. Money-weighted factors – strategic portfolio timing/tilting	
One-Fund TPA Level 5	17. Consolidation – reap economies of scale and scope 18. Explicit gearing – use of risk parity methods 19. Sustainability real-world impact – integrating 3D investing 20. Risk 2.0 – extending Risk 1.0 model to improve resilience	

The shipping containerization parallel

From idea → operating system

The parallel

The Big Shift – Shipping Containers in the 1950s



- **1956 – Birth.** Malcolm McLean launched the *Ideal X*, the first container ship, carrying 58 containers from New Jersey to Houston
- **1970s – Maturity**
- **United story–theory–data triad**
- **Story: Before containers, shipping was fragmented and inefficient—every port had its own way of handling cargo.**
- The introduction of standardized containers transformed global trade:
- Theory. Standardization unlocked scale – one system everyone could plug into
- Radical simplification – fewer touchpoints, less friction
- Network effects – ports, ships, and logistics aligned around a common operating model
- **Mindset. Proselytising, normalising, standardising and simplifying the idea**
- Data 0 to 90% in 15 years
- **TPA's shift mirrors this:**
- **Moving from fragmented ideas to a cohesive operating system**
- **Creating shared standards for mindset, measurement, risk, and organizational workflow**
- **Enabling scalability and interoperability across teams and strategies, technology shifts**

The QWERTY parallel

How old technology can become embedded. What it takes to shift it

The parallel



The obsolescence is embedded until new technologies and circumstance – here AI and regime shifts – change the balance

QWERTY was designed for mechanical convenience, not human speed. The original QWERTY layout (1870s) was engineered to *prevent typewriter jams* by spacing out commonly used letter pairs — a solution for the mechanical limitations of early typewriters. It was **not** built for typing efficiency or human ergonomics. Today, QWERTY persists because it became the entrenched standard.

Strategic Asset Allocation is the QWERTY keyboard of the investment world — a design built for the mechanical constraints of governance, not for the speed, adaptability, or complexity of modern markets. And like QWERTY, it can survive not because it is optimal but because it is familiar and institutionally embedded.

SAA was designed for governance convenience by prioritising:

- committee governance,
- clear accountability,
- policy stability,
- annual decision cycles,
- comfort for boards
- recognition in regulation.

It was *not* primarily engineered to address more contemporary considerations:

- dynamic risk management,
- fast-changing regimes,
- multi-horizon resilience,
- system-level within portfolio inter-actions,
- technological realities such as AI-driven signals, real-time data

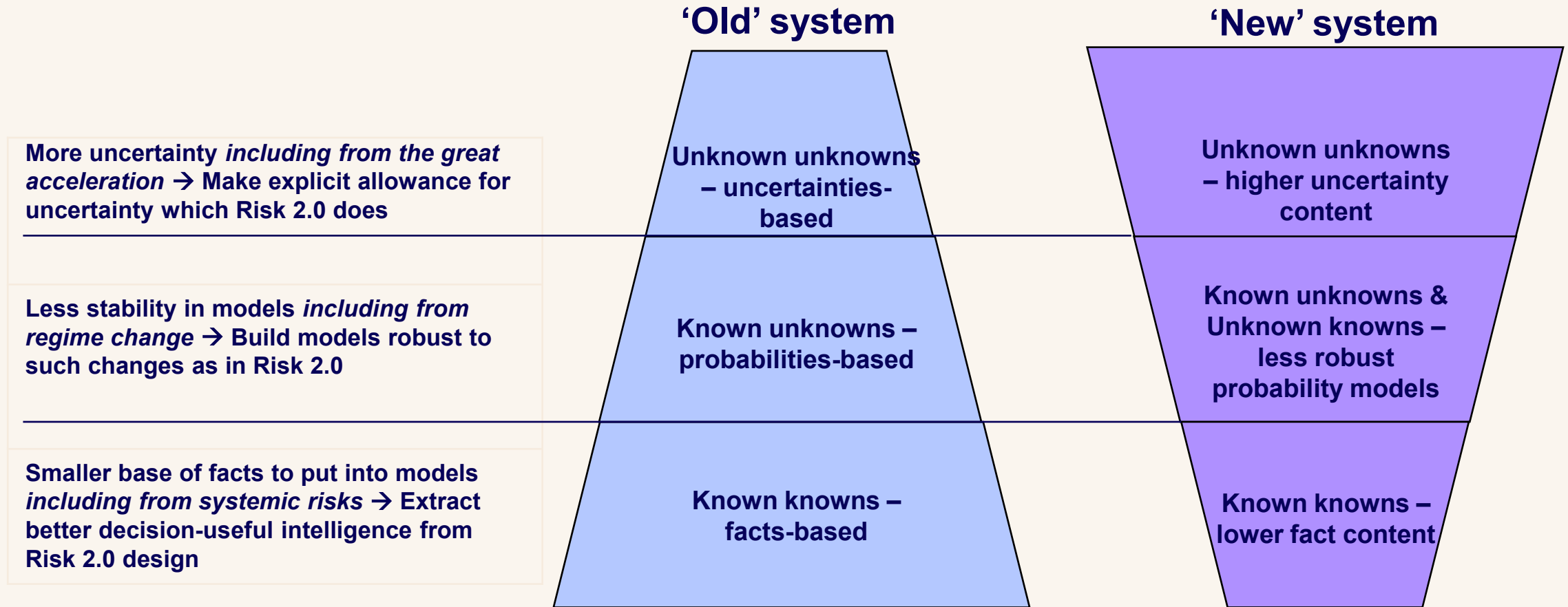
Drill-down

TPA Mindset

1	TPA is a system – a structured way of getting certain things done. It works within an organization-as-a system within the investment industry ecosystem. Like all complex systems – you only see a fraction of what’s going on; the joined-upness drives the engine; the mindset drives the joined-upness
2	Resilience matters more than basic diversification. Resilience emerges from foresightedness and adaptability. Resilience accepts the key premise that control is weak and quantification is soft. Hence integration beats optimisation, diversity beats diversification
3	Technology is a key governance decision. Technology and models help a lot where they sharpen, rather than replace, human judgment. Data intelligence has a north star of consolidation, integration and quality, that replaces fragmented discussions on reconciliation with accurate discussions on trade-offs.
4	Factors and themes add value as structural lenses that work best when anchored in durable forces — risk framing, reflexivity, liquidity, growth et al for factors; technology, energy systems, health innovation, security for themes. These investment ideas are much less effective when treated tactically
5	Soft initiatives that strengthen decision frameworks, data disciplines, governance effectiveness and institutional mindset and positively shape org-alpha and future outcomes through better portfolio and organisation resilience, the better outcomes emerge with a lag

Why now for TPA? Decision-making under uncertainty

Uncertainty rising with the great acceleration, the perils of systemic risk and the challenges of regime change.
And latterly doses of dysfunctional politics and governance



Resilience

- In this paper **Robustness** = Positioning the present-time portfolio to respond favourably to future threats. This is mostly about portfolio quality in the context of uncertainty to reduce vulnerability to adverse outcomes or degradation of portfolio quality
- In this paper **Resilience**= Positioning the through-time-organisation and portfolio to respond favourably to future threats. This is mostly about organisational system capacity for: anticipating threats, adapting to threats, assessing system emergence and adapting resilience through experience in a test of organisational maturity
- Resilience preparedness comes from macro foresight/ horizon scanning/ scenario work that prepares organizations for adverse conditions and systemic risks (climate, geopolitics, planetary boundaries) which are increasingly uncertain.
- *Bridgewater defines resilience as a combination of*
 - *narrower range of outcomes, making performance more predictable*
 - *less severe losses in tail-risk scenarios,*
 - *less risk of sustained periods of underperformance, and*
 - *earning more return per unit of risk over time*

Resiliency is most simply and effectively summarized as maximizing the probability of achieving one's investment objectives and correspondingly minimizing the probability of falling short of them
- *The TPA read-across is to widen the breadth of investment opportunities to narrow the cone of the investment outcomes that follow from present-time (cross-sectional) portfolio risks and through-time (inter-temporal) portfolio management.*

1. TPA for asset managers

Still maturing

	Multi-asset mandates	▪ The opportunity to use TPA as the ‘investment system’ in preference to SAA (where SAA is policy benchmark plus sleeves). Some diversified growth funds have been managed as TPA. ▪ Alignment to client goals and client mindset may be a challenge
	Sleeve mandates	With increasing TPA maturity, mandates start to shift from “manage this sleeve” to “contribute to the total-portfolio challenge.” by specifying: ▪ Contribution to total-portfolio outcomes, not just asset-class performance ▪ Alignment to client goals, including resilience, sustainability, and multi-dimensional success metrics ▪ more emphasis on systems-level value and a scorecard, less reliance on traditional benchmarks ▪ Wider flexibility and breadth in what the manager can do (especially as maturity rises)
	With higher level engagement	With increasing TPA maturity, a TPA mandate may also encourage: ▪ Greater integration with cross-portfolio decision-making, less of a standalone mindset ▪ Greater contribution to sustainability including stewardship ▪ Contribution to client IP, in areas like the macro, best ideas, context ▪ Integration with whole-fund processes, including data, dynamism, and governance expectations

Summary Slides (7) TPA – the gateway to sustainability

Experimentation with protection, exploitation with integration

- What are we solving for? Asset owner boards set overarching sustainability objectives but in practice, implement these high-level ambitions through bottom-up company assessments, ESG scores, and exclusion lists that operate in ways disconnected from total-fund goals.
- This creates a fundamental gap: board-level sustainability intent rarely translates into portfolio-level strategy with measurable risk, return and real-world impacts
- TPA's architecture – with its emphasis on goal alignment, best total portfolio ideas, competition for capital, dynamism and dashboard-driven governance – offers the framework for integrated sustainability
- To embed sustainability effectively within TPA, organizations must:
 - Align sustainability ambition with organizational capacity and opportunity
 - Integrate stewardship, including systemic stewardship, into core investment processes
 - Build out the intelligence stack to cover sustainability and systemic factors
 - Foster a culture that supports long-term, system-aware decision-making
- And incorporate the additional requirements of systems-level investing, including:
 - Explicit focus on system-level risks and their relevance to fiduciary duty and financial materiality
 - Clear objectives and processes for influencing outcomes across the investment chain
 - Commitment of resources and technical capability to act on leverage points
 - Development of investment intelligence that captures causal relationships and feedback loops
 - Assessment and reporting of the effectiveness of sustainability-related actions

Hyperscale capital particularly suited to TPA model

Example: Brookfield Global Transition Fund is a capital hyperscaler for the energy system

XYZ – a TPA AO

- **Scale**
 - Unit sizes up to \$2bn
- **Deployment**
 - **Adaptive at top of house to the mix**
 - **Aligns with thematic positioning**
 - **AO adapts to total portfolio exposures**
- **Systemic impacts**
 - AO oversight on thematic/systemic risk
 - AO oversight on operating assets
 - Stewardship oversight
- **Relationships and access**
 - AO partnership-minded

Brookfield BGTF II

- **Scale**
 - \$20bn fund
- **Deployment**
 - **Investing across the capital stack**
 - Into **platform-scale energy systems**
 - Across global renewables and energy transition
- **Systemic impacts**
 - Largely incidental, not that intentional
 - Through operating assets
 - Stewardship channel
- **Relationships and access**
 - Highly evolved channel of relationships and trust

TPA orientation enables the AO to adapt its total portfolio mix to the fund's exposures.
Not so easy in a SAA orientation, starting with multi-asset class decisions

The 2.0 Professional. Needing to adapt the skill-set

The investment professional of the future needs to be **T-shaped** (having strong verticals in domain knowledge and good horizontal connections) with stronger competencies in these areas below.

The 2.0 Professional



Artwork
by

Roger's
12-year old
granddaughter

Bridge-
builder

Building strong and influential personal and corporate coalitional relationships in which mutual trust is central

Systems-
navigator

Building situational fluency in all of the multiple ecosystems you inhabit – your organisations, etc

Tech-
connector

Ability to enable magic things to happen with technology driven by the HI (Human Intelligence) x AI combination

Sense-
maker

Making sense of the world at the zoomed-out and zoomed-in levels driven by critical and systems thinking

Brand-
builder

Developing personal brand growth and living the corporate brand driven by strong identity and authenticity

People-
reader

Fluency with EQ and soft skills driven by growth mindset, inquisitiveness and empathy

Summary Slides (7) TPA – the sandbox, the guardrails and the gateway

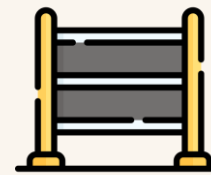
Experimentation with protection, exploitation with integration



Sandbox. A safe space for creative thinking/ experimentation where new things can be tested/ refined

- **Sandbox.** The need for unique test-and-learn work to be undertaken to be run to get TPA traction in its build-out
- **Arc of** better culture and governance. The relentless rise of the ‘soft stuff’ and its impacts through TPA mindset
- **Benchmarks.** The rise of the (risk-related) reference portfolio. The three body problem and solution
- **Comp.** Improved alignment to capture team-based contributions. Objectivity vs materiality. The 4-Pockets design

Guardrails...
Building a safe space into the TPA system with guardrails for comfort and protection



- **Guardrails.** With innovative content, putting guardrails in is essential to ensure stakeholders feel ‘safe’
- **Oversight.** Developing a stronger Board and IC oversight capability and engagement
- **Scorecards.** How Board and IC oversight should measure progress, risk and success is a crucial guardrail.
- **Governance 2.0.** The big enablers from delegation, measurement and thinking ahead, captured in a governance reset



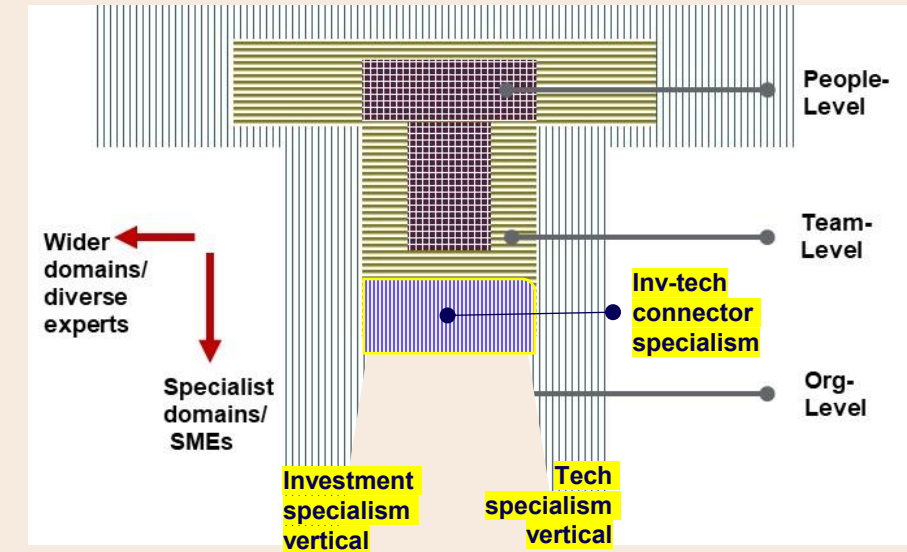
Gateway An entry point that enables and catalyses opportunities for a more integrated arrangement and system

- **Gateway.** The opportunity to open new avenues with TPA flexibilities producing a better maturity pathway/ direction of travel
- **From Frictions to Fuel.** People factors moved from the frictions column to the fuel column as the TPA system builds traction
- **Dashboards.** Better tech stack for quality of data access. Better intelligence stack for quality of signal. Captured in dashboards
- **Design.** Better risk models. Better sustainability. Better integration. **Experience.** Learn from failure and success of early adopters

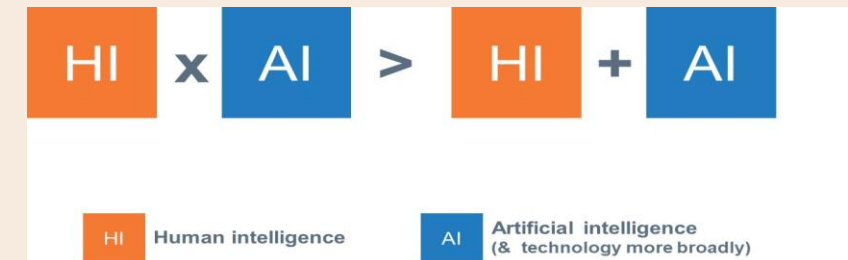
Organisational model. T-shaped teams, and Pi(π)-shaped organisations

How organisations must change their designs, connections and workflows to adapt with AI

Talent	- Investment skill relatively timeless, but technology skills very different - Tech talent needed in investing – data science in limited supply - Technology was maybe 10% of the AO story, now it's maybe 20-30%. - All progress in both HI and AI goes in a form of an S-curve, slow in the case of HI, fast in the case of AI. So, HI restraining the AI speed
T-shaped teams	- T-shaped talent works well in investing; wider knowledge and subject disciplines, deeper relationships and connections, smarter on delegations - At the organisation-level, having a dual operating model that combines hierarchical (vertical) functions with networked (horizontal) functions, using an extended peer community to enable integrated thinking and actions - At the team-level, in more specialised areas like the technology and investment domains, teams need connectors that speak fluently across the disciplines and bring more cognitive diversity into the team - At the people-level, T-shaped professionals have a combination of deep domain skills and wide connections skills which add together the benefits of specialist and generalist skills
Pi-shaped teams	- With AI adding considerable opportunity and complexity to work design, the T-shaped org needs two integrated verticals – investment and tech (1) with strong connections between them (2). It's a Pi-shaped org as a result. - The investment role (3) has to be more of a process designer - This achieves the benefits of the HI x AI equation with cross-functional collaboration between quantitative and discretionary teams and experts, rather than working in parallel siloes.

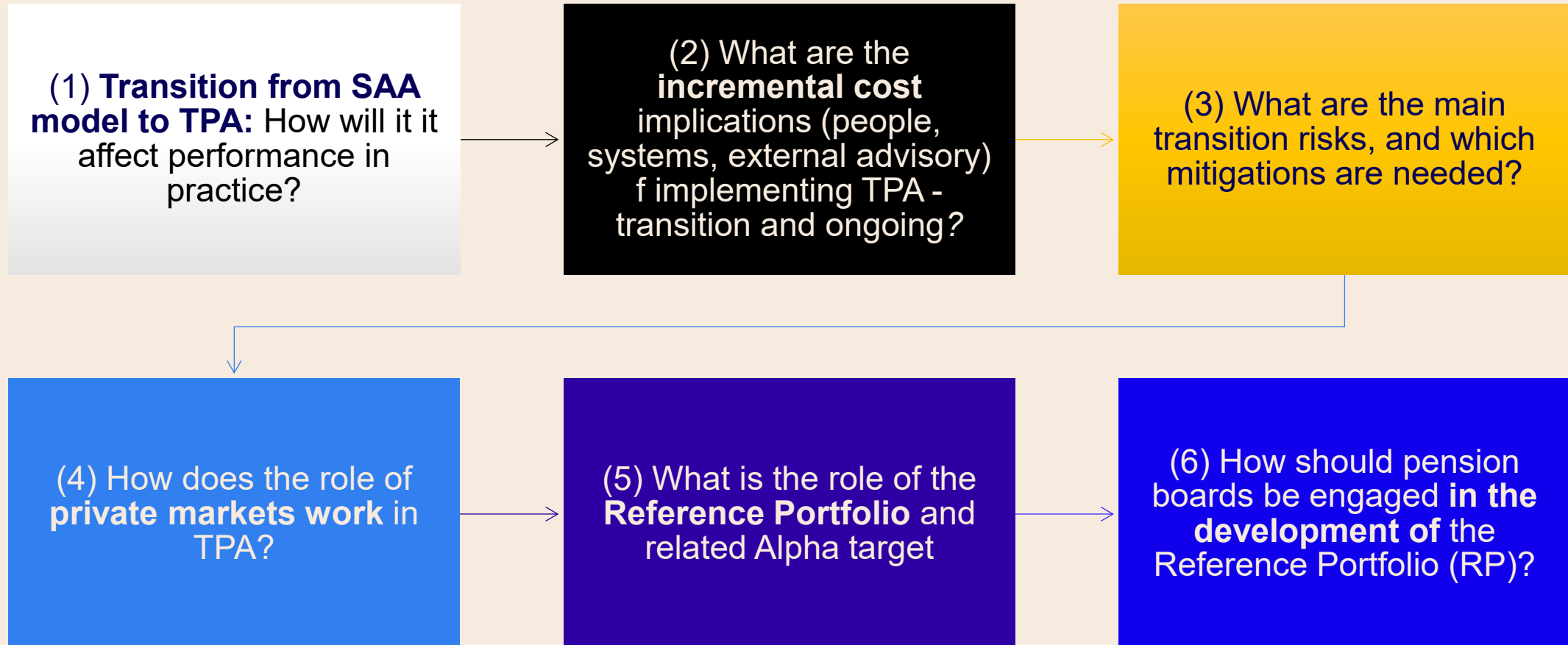


The HI x AI Equation



Transitioning

Six great questions



Six board questions

1. **Purpose, Vision & Goals:** Can we state vision and goals succinctly and inspiringly?
2. **Risk Appetite:** Do we own a reference portfolio that encodes risk appetite and sets a cost of capital?
3. **Guardrails & Cadence:** Are delegations robust enough for us to be fast and safe?
4. **Resilience:** Do we have a scenario and liquidity framework and map that we trust?
5. **People & Culture:** Are the motivations and culture aligned to one-fund collaborations and outcomes?
6. **Performance Expectations:** Have we realistic expectations for performance in a TPA?



Key elements of Transition Programs

The Costs of Transition

- **Resource allocation** for the change program
- **Investment in technology** and data infrastructure.
- **Opportunity costs** during the transition.

The Risks of Transition

- **Cultural Resistance:** Undermining how well TPA can be embedded
- **Ineffective Implementation:** Failure to properly address governance, data, liquidity, and culture.
- **Inconsistent Data:** Good data platforms are essential.
- **Liquidity Management:** Critical with more diversity
- **Market Conditions:** Affecting the optics of the transition

TPA transition program

- **Vision and Purpose:** Anchoring change in a compelling vision
- **Leadership Coalitions:** Building strong alliances across the organisation
- **Disciplined Process:** Employing rigorous and agile program management
- **Letting Go of the Past:** Overcoming status quo bias, adapting and innovating
- **Systems Leadership:** Inspiring a sense of being part of a larger change with wider all-round benefits

Successful TPA Transitions

The fundamental test of TPA feasibility is:

- Securing Management and Board commitment to a compelling vision for TPA's net value proposition
- Gaining Board and Management comfort with a governance reset
- Fostering a 'one-organisation' mindset and embedding these in behaviours throughout the organisation
- Mobilising the organisational capability, resources, and readiness required to undertake the TPA transition

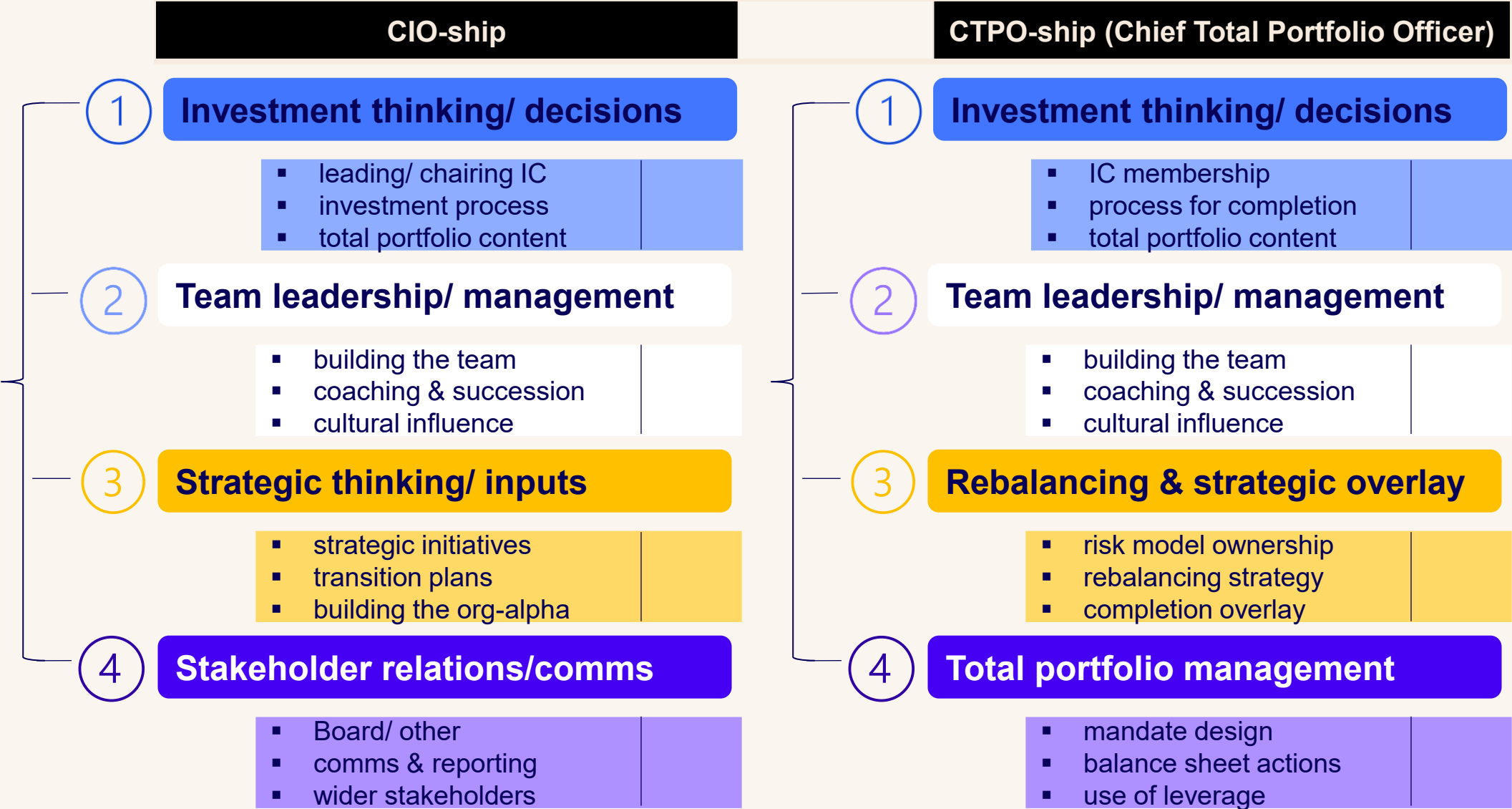
The signals of successful TPA transitions

- Governance/ Delegations Reset
 - Diligent oversight/ Clearer ownership
- Management Delivery Reset
 - Extend CIO-ship/ Introduce CTPO-ship
- Beliefs Level-set
 - Deepened embedding/ Better aligned
- TPA Mind-set
 - One-Org culture/ Org-Alpha focus
- Reference Portfolio Guardrail
 - Risk appetite and tolerance/Risk budget construct
- Dashboard Scorecard Constructs
 - Intelligence stack/ KPI & KRI incentives

The TPA Gateway

- Management can deepen its top-down investment influence, with its CIO-ship and top-of-house function playing bigger roles; notably in aligning, strengthening and operationalizing the competition for capital; investment skill can be developed through stronger investment philosophy, better resilience, more consistent use of factors and themes
- Boards can become more effective within TPA arrangements – in their strategic ownership of key policy, their diligent oversight practices and co-ownership of core organization-wide beliefs; responsibility, ownership, oversight and accountability model is re-set
- Deeper investment foundations can be laid – better org-design providing an organizational edge and other key factors – more valuable beliefs and principles, stronger risk models, addition of resilience, better data intelligence, more meaningful measurement

Summary Slides (8) CIO-ship and CTPO-ship roles: Job tasks

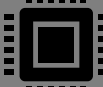


The Intelligence Stack built from the People, Process & Tech Stacks

All data, analysis and decision-making exists within the Intelligence Stack

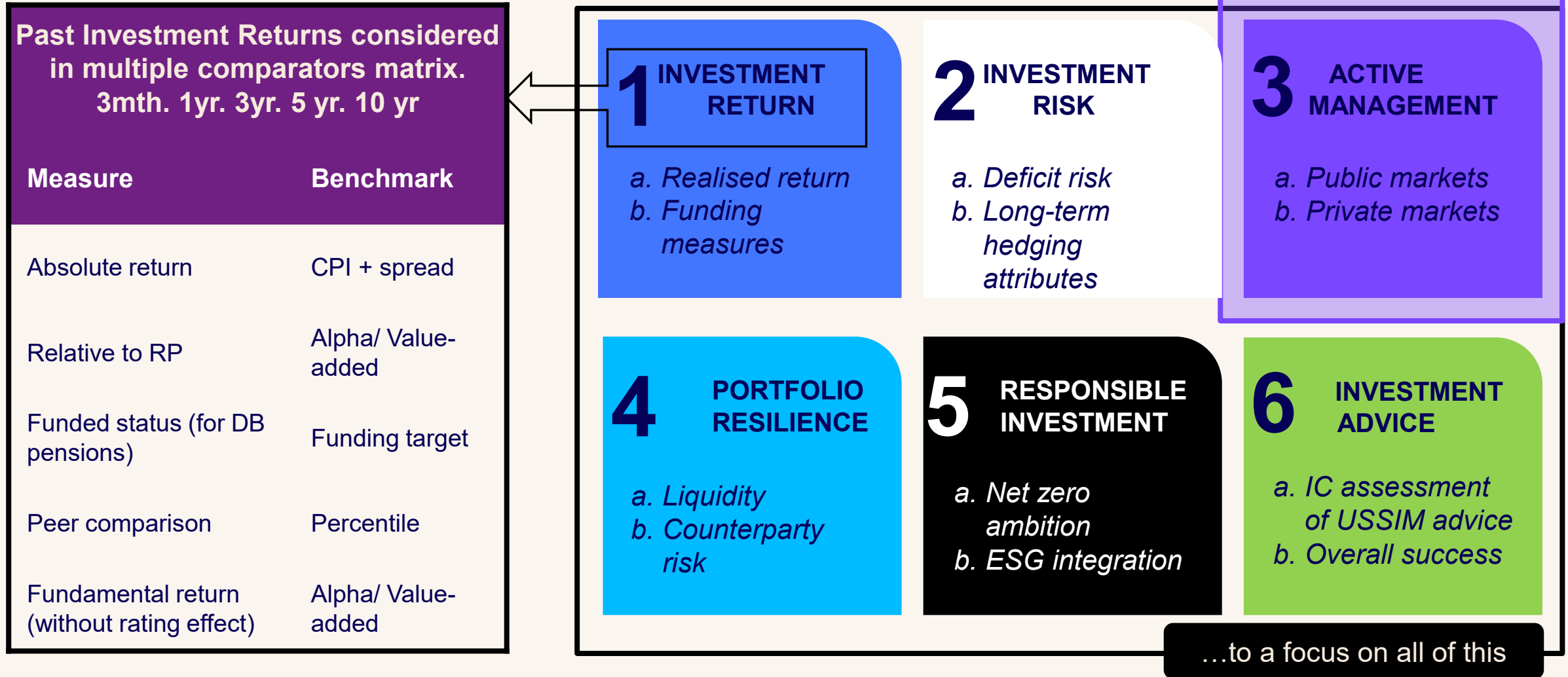
And the HI x AI combination raises the accuracy, breadth, depth and velocity of that intelligence.



									
People stack		Process stack		Tech stack		Intelligence stack: the cognitive production system			
T/Pi-shaped org with connectors and aligned incentives		Adapting. Looped learning in feedback loop		Front-end APIs and user interface HI x AI delivery		CIOship macro & decisions . BIC oversight & engagement		In the TPA, this is the actual allocation decisions in a blended (HI x AI) decision system producing more accurate, explainable, scalable outcomes	
Governance and group actions. BIC and CIOship		Real-time measurement and implementation		Data and process governance. Data reconciliation		Collective intelligence emergent from BIC & CIOship processes		In the TPA, competition for capital, risk/ resilience framing, integration of HI × AI to advance defined goals in a perception-to-action system	
Outsourcing/partnership & engagement connections		Workflow design and action in multiple agency situations		Data cleaning. Data meta-tags. Data engineering		Intelligence synthesised in scorecards & dashboards		In the TPA, organising information into meaningful structures: models, beliefs, maps, scenarios, stories in a form of knowledge representation	
Culture & innovation, Beliefs, cognitive diversity		Perception, process and reasoning. Beliefs & Proposition		Hardware & Software. Shrinking legacy systems		Information parsed for its provenance & signal/materiality		In the TPA, high quality data engineering and data representation incorporating data materiality and integrity refined into factors and themes	
Talent + Depth, Breadth & Inter-connection		Adaptive learning system tuned to two-way feedback		Data quality, data lineage, and flexible data architecture		Structured and unstructured data. Hi velocity		In the TPA: all the raw market, sustainability, macro, organisational, and systems-risk data entering the Intelligence Stack.	

The balanced scorecard. Source: USS

Good governance through changed design



The TPA Portfolio Quality Dashboard

Illustration of scorecard comparing SAA version vs TPA version.
Robustness and resilience key additions to the line-up of factors

	Dimension	Metric	SAA	TPA	SAA illustration	TPA illustration
Prime factors	Return	Expected return vs cash (% pa)	3.0%	4.6%	The SAA Model is based principally on these 5 factors ↓	The TPA Model is based on more factors ↓
	Risk	Volatility (% pa)	7.5%	7.3%		
	Efficiency	Sharpe ratio	0.40	0.63		
	Relative risk	SAA/TPA relative risk	1% - 3%	3% - 5%		
	Low cost	MER	0.23%	0.54%		
Ancillary factors	Sustainability	ESG risk exposure (/100)	33	23		
	Climate	Implied Temperature Rise	2.8°C	2.5°C		
	Flexibility	% daily liquid	10%	26%		
	Access to skill	% contribution from skill	6%	31%		
	Governance	Oversight complexity	4/5	3/5		
Robustness & Resilience factors	Diversity	Equity beta	0.63	0.37		
	Tail risk	Expected tail risk (% TCE)	26%	18%		
	Systemic risk factor	Systemic tail risk – 10Y % TCE	x	x		
	Climate risk factor	Climate tail risk – 10Y % TCE	x	x		
	Systems-stewardship	Systems-stewardship spend (%)	x	x		

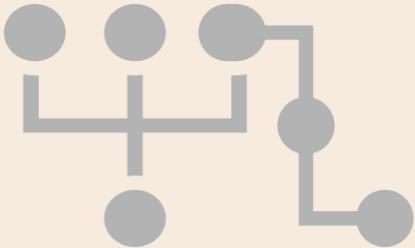
Deeper thinking on risk



Progress on risk has been slow with the old MPT and CMA models largely unchanged for over 30 years



The pace of change and challenge is speeding up, notably in new regimes and new systemic risks

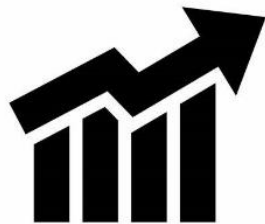


Risk 2.0 extends and improves risk thinking by introducing wider, softer, and longer features

2026
WT
W.



The SAA 'system' has seen risk through a tracking error mindset and missed the critical mindset of mission impairment



Systemic risk is on the rise, notably geo-political, tech and climate.
88% of peer funds believe it is growing in size and incidence
81% say it's under-estimated, poorly measured, needs urgent attention

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Where next?

The Org 2.0 series in a nutshell

What is it?		How is it different from version 1.0?
Investment 2.0	▪ The TPA system, methodologies and guardrails	Allowing for complexity, non-linearity, high-noise system features using goal-driven processes and multiple comparator measurement vs the narrow discipline of SAA using benchmarking that assumes a linear, stable and low-noise system (making the maths simple)
Governance 2.0	▪ Tighter oversight, ownership, accountability	Governance designed expressly for achieving best outcomes via optimal risk practices, playing to strengths, and smart goals and measurement vs governance designed to be measurement and career risk friendly and is clunky as a result
Risk 2.0	▪ Wider, softer, longer risk and resilience	Risk framed widely through the lens of systems thinking allowing for regimes, systemic risk and resilience and incorporating uncertainty, term structure, fallibility and reflexivity vs risk framed narrowly as (stable) volatility and correlation using CMAs and optimisation
Sustainability 2.0	▪ 3D investing – risk, return & real-world impact	Allowing for the two-way feedback between the wider ecosystem and investment strategy and stewardship with explicit consideration of time frame vs the ESG version of sustainability in which portfolio risks and returns are central factors
Technology 2.0	▪ Applying an HI x AI augmentation/combination	Design, supervision and application of HI x AI-generated insight and decisions via re-engineered workflow, role resets and agentic interventions in hybrid decision processes vs the well-informed but discretionary and intuitive HI decision processes
The 2.0 Professional	▪ New skills, roles and mindset	Adapting to the needs of the HI x AI proposition and the T-redesign with Pi features with greater ownership, measurement and accountability vs the strong verticals forerunner

Why 2.0?

2.0 naming	▪ From software versioning, where a move from version 1.x to 2.0 signals: not a replacement, not a clean break, but a major upgrade in capability, usability, or maturity. ▪ Over time, the metaphor spread well beyond technology because it elegantly captures a step-change in performance or behaviour, without implying that the underlying model is obsolete.
Evolution not reinvention	▪ “2.0” signals that the core architecture remains in place, but its expression is upgraded: ▪ more integrated, more dynamic, more resilience-aware, more aligned with new conditions. ▪ Maturity — moving from early concept to operational system; it has developed enough practice, standards, and shared language that it is ready for the next stage.
Addition not substitution	▪ A “2.0” model usually layers on new capabilities, rather than discarding the earlier ones. Examples: ▪ Risk 2.0 adds uncertainty and systemic-risk awareness on top of traditional risk. ▪ Measurement 2.0 adds soft metrics, KRIs, and dashboard intelligence. ▪ Org 2.0 adds T-shaped and Pi-shaped working, not removing traditional expertise.
Timely adaptation to a changed environment	▪ External conditions have shifted enough that the old framing is insufficient, but still foundational. ▪ In your TPA narrative: systemic risks, regime changes, technological acceleration (HI × AI), private–public integration, sustainability expectations ▪ ...all justify a 2.0 upgrade across multiple dimensions.

Conclusions. Where Next?

- TPA appeared to cross the innovation chasm (Everett Rogers/Geoffrey Moore) with organizations such as CalPERS, NZSuper, Future Fund, and PGGM showing progress in 2025. Their successes have triggered 'follow my leader' behavior, encouraging others to make the transition.
- The transition to TPA remains a journey of transformational change, demanding vision, leadership, and disciplined execution.
- While the potential benefits are substantial, they must be weighed against the costs and risks involved; and many funds are not resourced to make this transition
- The expansion of knowledge sharing among peer funds, combined with the work of industry providers, has made a corpus of resources available for organizations to consider their options and progress their funds
- There are a multitude of versions of TPA in existence but early signs of some standardization. popularization, and normalization were evident in how leading funds have developed.
- Research next steps: possible directions – resilience, Risk 2.0, the 2.0 series (see over)

