



Vendor Showcase

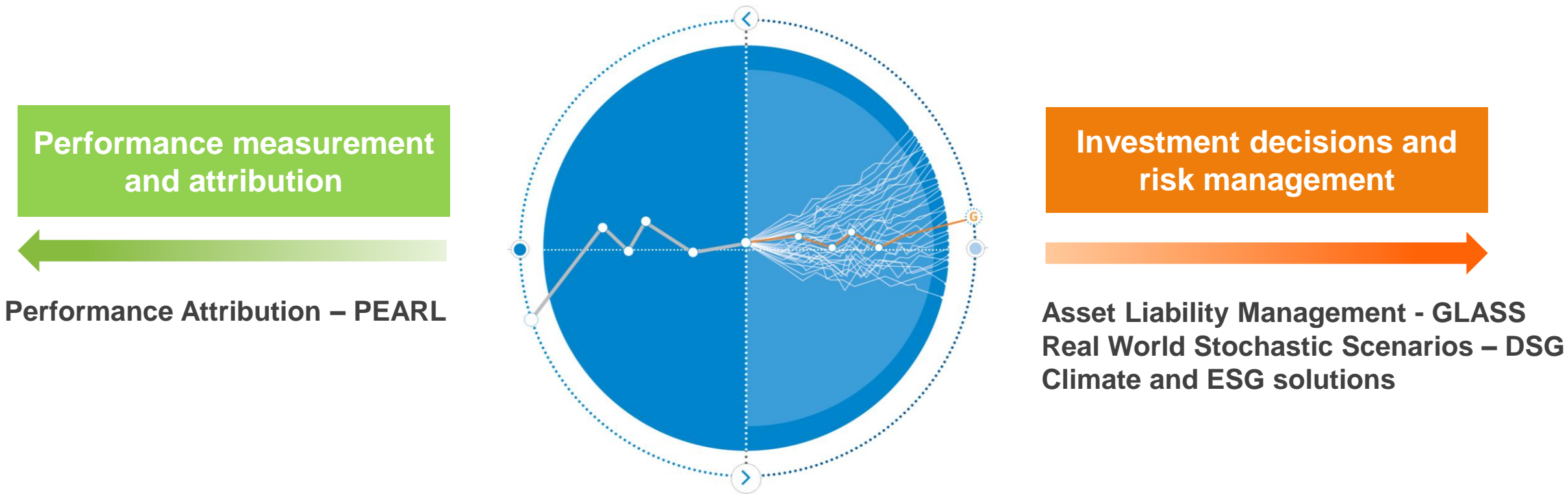
Top-Down Attribution
focusing on decision-
based attribution and
currency overlay

November 9, 2020

ORTeC
FINANCE



Global provider of technology & solutions for risk and return management



Performance measurement and attribution



Performance Attribution – PEARL

Investment decisions and risk management



**Asset Liability Management - GLASS
Real World Stochastic Scenarios – DSG
Climate and ESG solutions**



Expert provider of investment decision technology and solutions



**Founded in 1981
300 employees**



Independent – 100% owned by employees



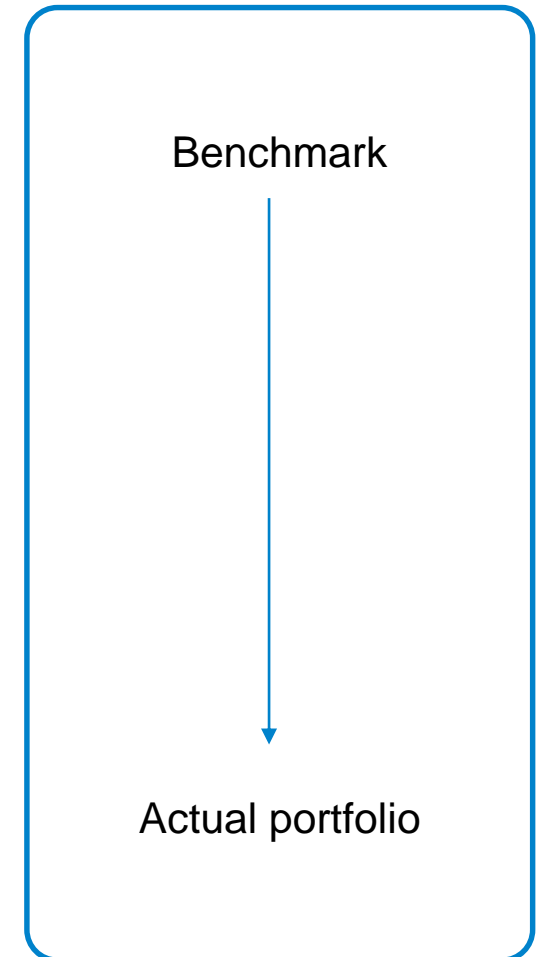
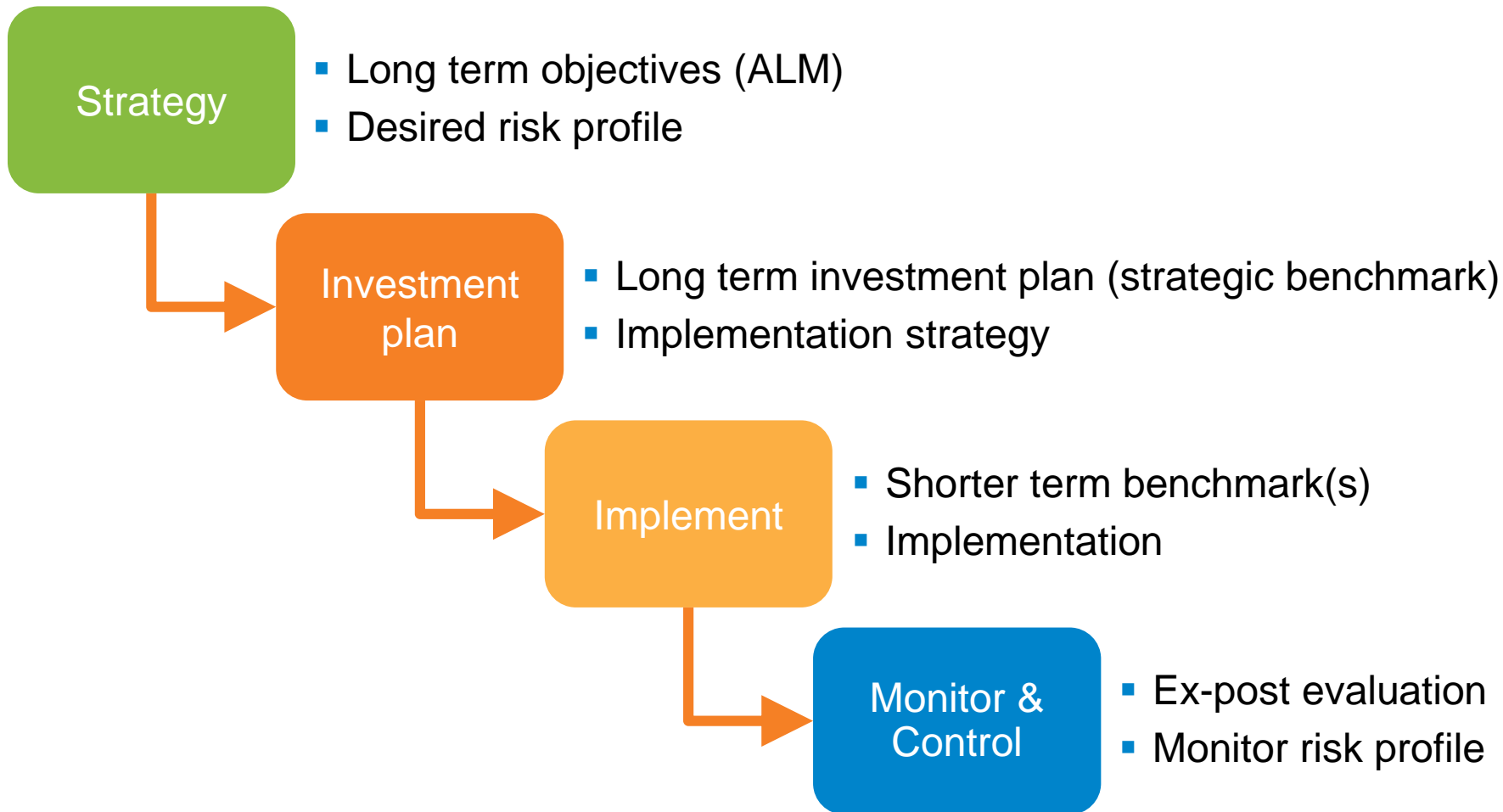
Global and long-standing client base



Innovative, strong ties with academic world

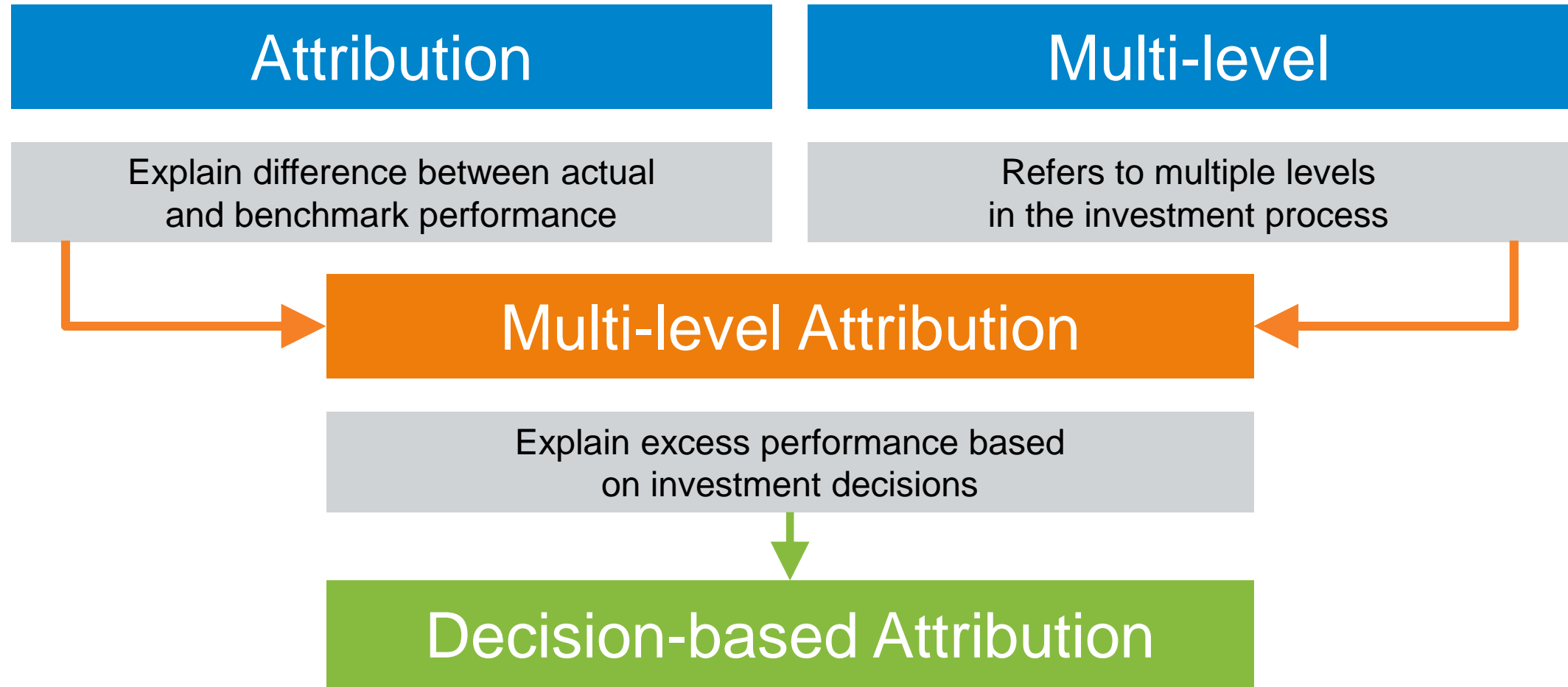
Decision-based Attribution

Investment decision process (institutional)



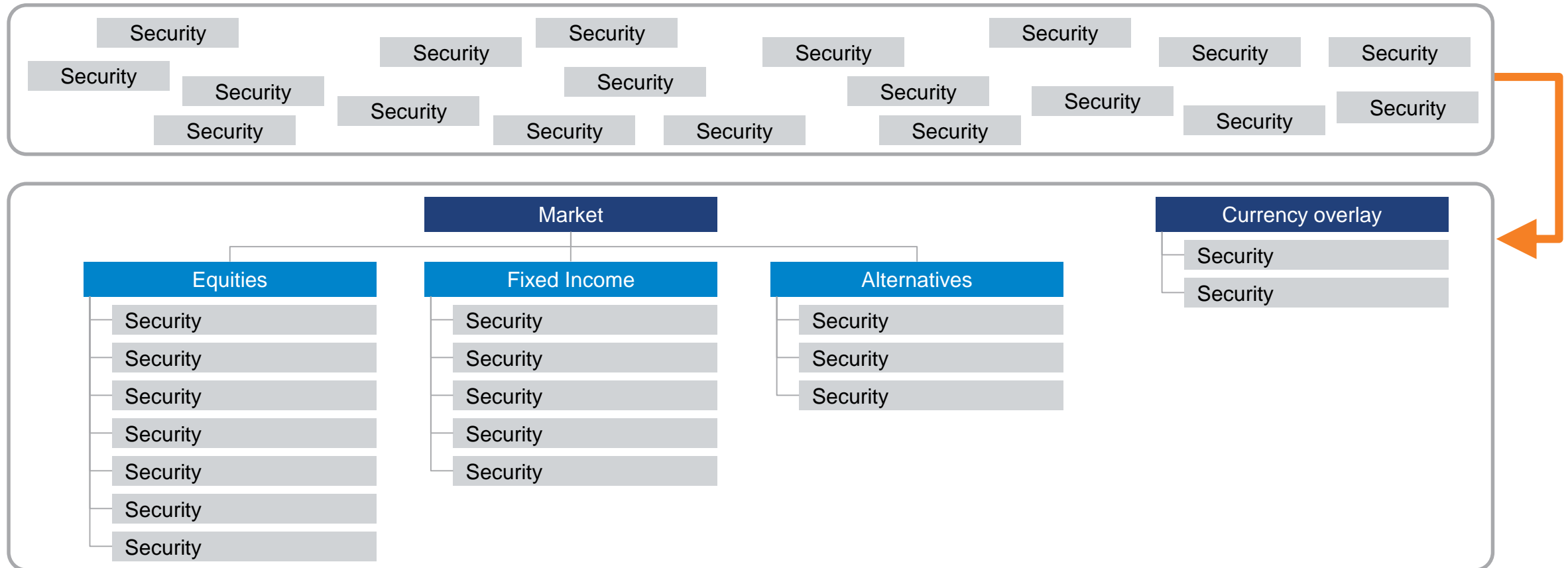


Decision-based Attribution



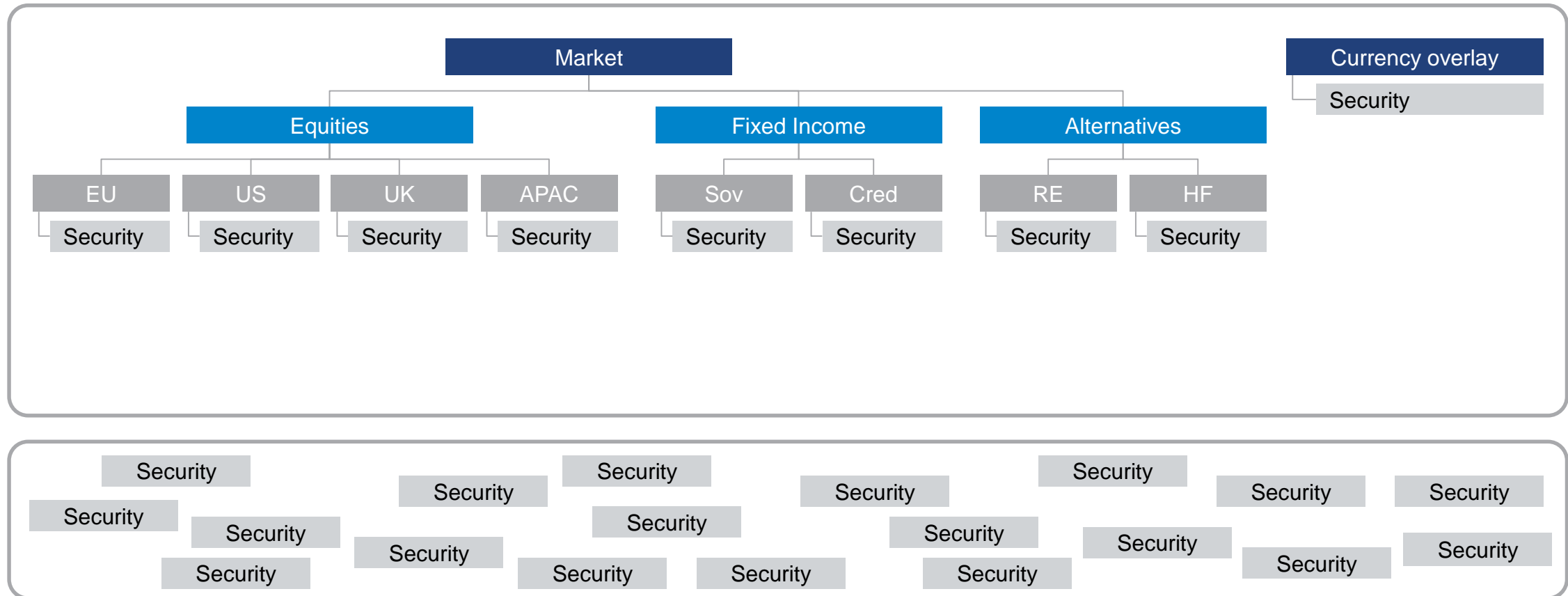
Bottom up approach

Analyze excess return where securities and classifications are used as a starting point



Top down approach

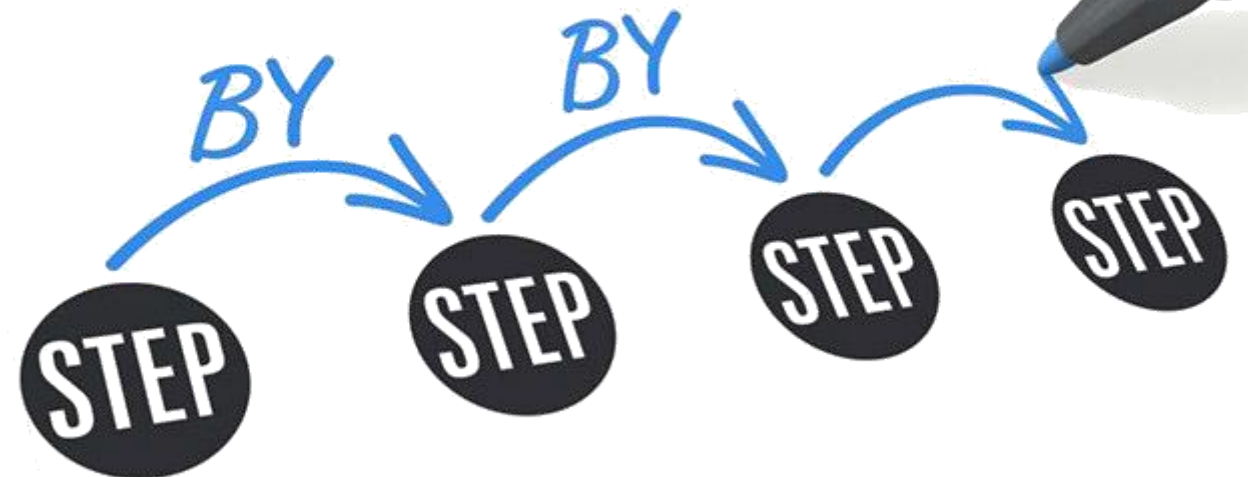
Analyze excess return where the **portfolio hierarchy** is used as a starting point



Multi-level attribution

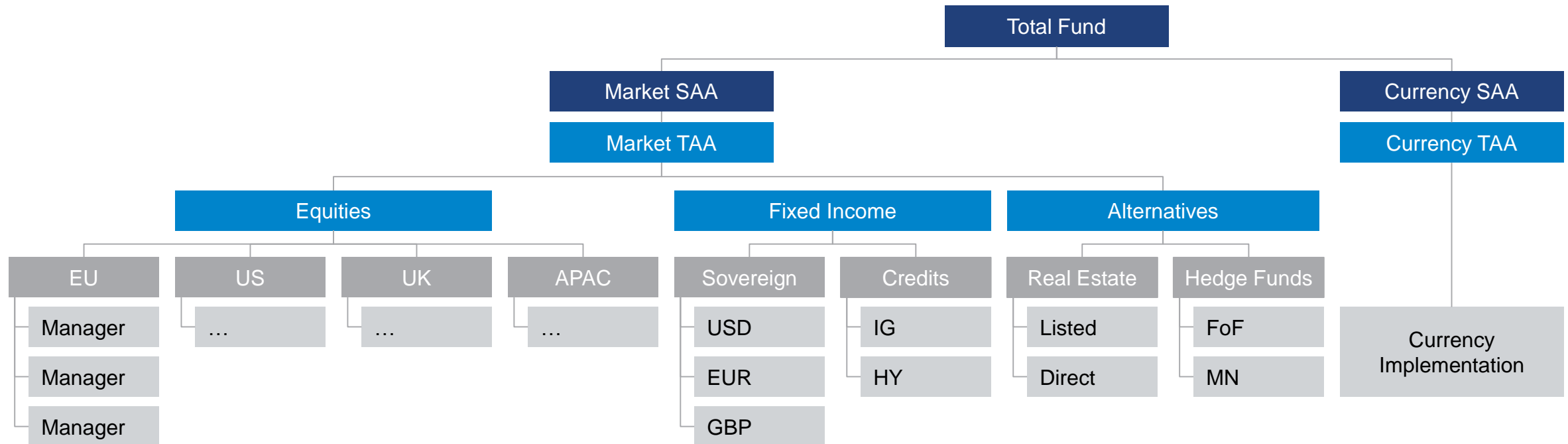
The traditional bottom-up and top-down approaches have limitations

- The top down approach is a first step into a **decision-based** approach
- However it still does not solve some issues that are common in (institutional) multi-asset class portfolios
 - Strategic versus dynamic and tactical asset allocations
 - Liability matching versus return portfolios
 - Overlay structures
 - Allocation to illiquid asset categories
 - Benchmark inconsistencies
 - Rebalancing or specific investment strategies



Decision-based approach

Analyze excess return where the **decision process** is used as a starting point



	Return			Risk
	Market	Currency	Total	TE
SAA	1.47%	-0.62%	0.85%	0.00%
Actual	1.59%	-0.55%	1.04%	0.80%
Excess	0.12%	0.07%	0.19%	-

 Poll

Do you have access to the added value of the asset allocation decisions compared to your SAA or liability benchmark?

- A Yes, as part of our standard reporting
- B Yes, with some workarounds outside of our performance system
- C I could make a guesstimate
- D No



Examples in PEARL



Summary

Portfolio invested in multiple asset classes

Attribution

Explain difference between actual and benchmark performance

Multi-level

Refers to multiple levels in the investment process



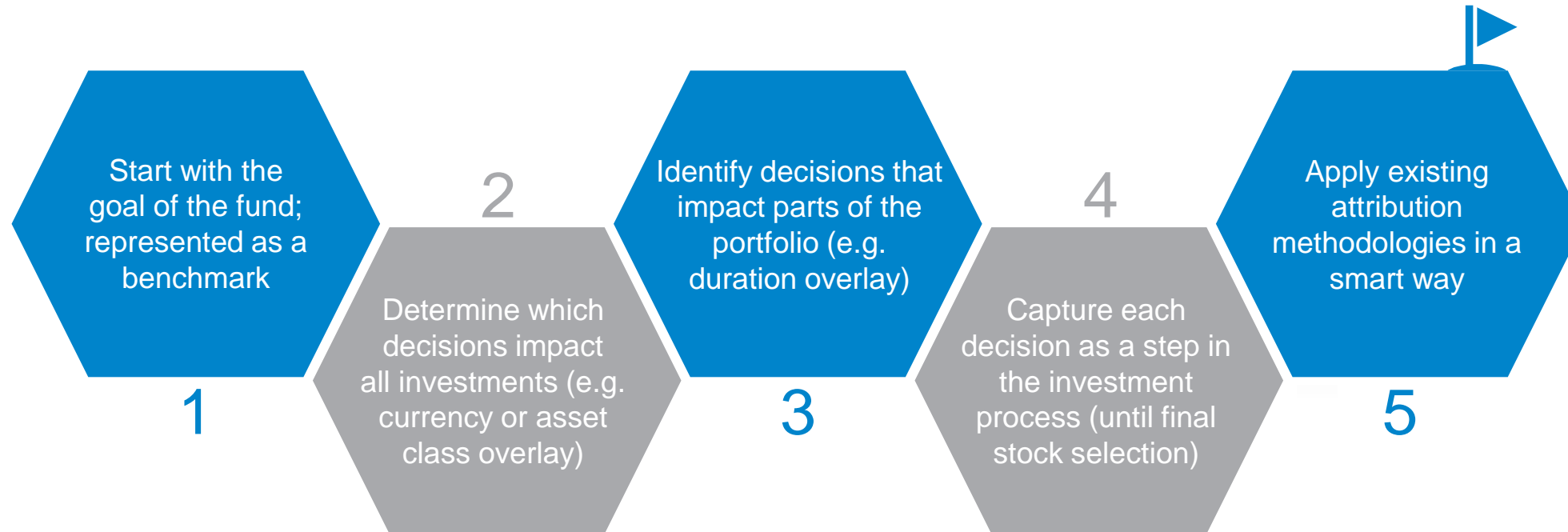
Multi-level Attribution

Explain excess performance based on investment decisions

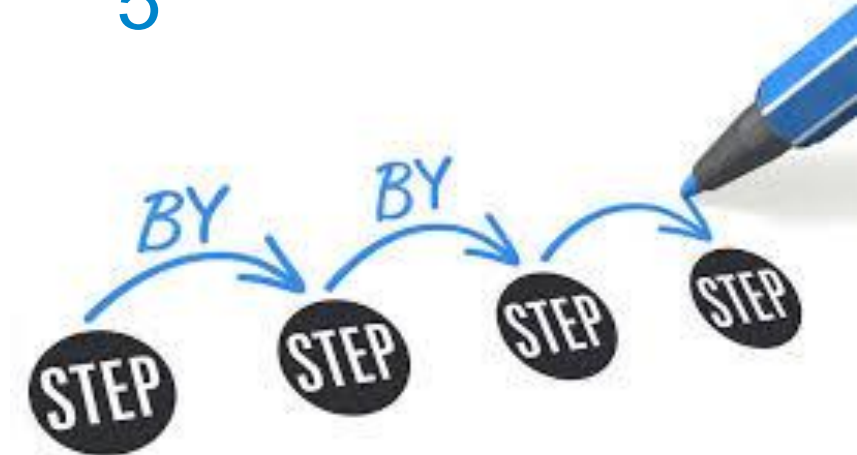
Decision-based Attribution

Conclusion

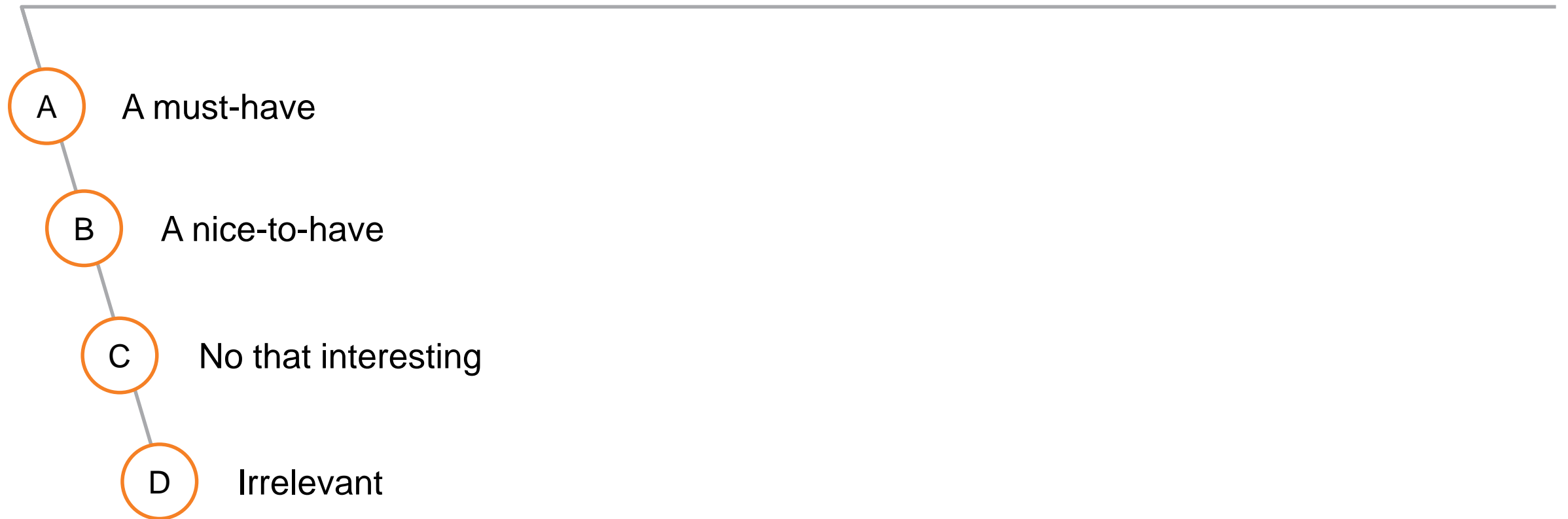
How to master performance analysis of complex multi-asset portfolios?



Structure the investment decision process and measure each step



For asset owners and their asset managers decision based attribution is





Q&A



Maurits van Joolingen
Business Developer

+31 (0) 20 700 9752
maurits.vanjoelingen@ortec-finance.com

Rotterdam

Ortec Finance bv
Boompjes 40
3011 XB Rotterdam
The Netherlands
Tel. +31 10 700 50 00

Amsterdam

Ortec Finance bv
Naritaweg 51
1043 BP Amsterdam
The Netherlands
Tel. +31 20 700 97 00

London

Ortec Finance Ltd
Bridge House
181 Queen Victoria Street
London, EC4V 4EG
United Kingdom
Tel. +44 20 3770 5780

Pfäffikon

Ortec Finance AG
Poststrasse 4
8808 Pfäffikon SZ
Switzerland
Tel. +41 55 410 38 38

Toronto

Ortec Finance Canada Inc
250 University Avenue
Toronto, ON M5H 3E5
Canada
Tel. +1 416 736 4955

Hong Kong

Ortec Finance Asia Ltd
Unit 211, 2/F, Building 12W,
Phase 3 Hong Kong Science Park
Shatin, New Territories
Hong Kong
Tel. +852 2477 92 88

Melbourne

Ortec Finance Pty Ltd
WeWork Level 7
222 Exhibition Street
Melbourne, VIC 3000
Australia
Tel. +613 8899 6455



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