# LTS CHALLENGE 2025
Detailed Instructions - Phase 1

You and your partners are Co-CIOs (Chief Investment Officer) of a renowned US-based hedge fund, called Group Name. Your firm is known for taking concentrated positions in companies where you have a differentiated view, aiming to maximize returns. You have a fundamentalist investment philosophy, with a broad mandate for allocating to different strategies (growth, quality, event-driven, etc.).

Your fund currently does not hold any stake in the **Semiconductor** sector. Following thoughtful discussions with fellow fund managers and thorough deliberation, you have concluded that it is worthwhile to devote time and effort to better comprehend the industry. This could lead to investing a portion of your portfolio in one of the companies within this sector.

As a starting point, you have carried out an initial evaluation to define the potential investment universe and identify prospective companies that comprise the breadth of opportunities. Based on the Semiconductor value chain (Figure 1), you've selected five sub-segments to further diligence: **(i) Fabless chip designers; (ii) Foundries; (iii) Testing & Packaging; (iv) Design Software, R&D tools, and IP; (v) Manufacturing/Assembly Equipment and Ancillary Fab Services**.

<u>Figure 1.</u> The Semiconductor Value Chain
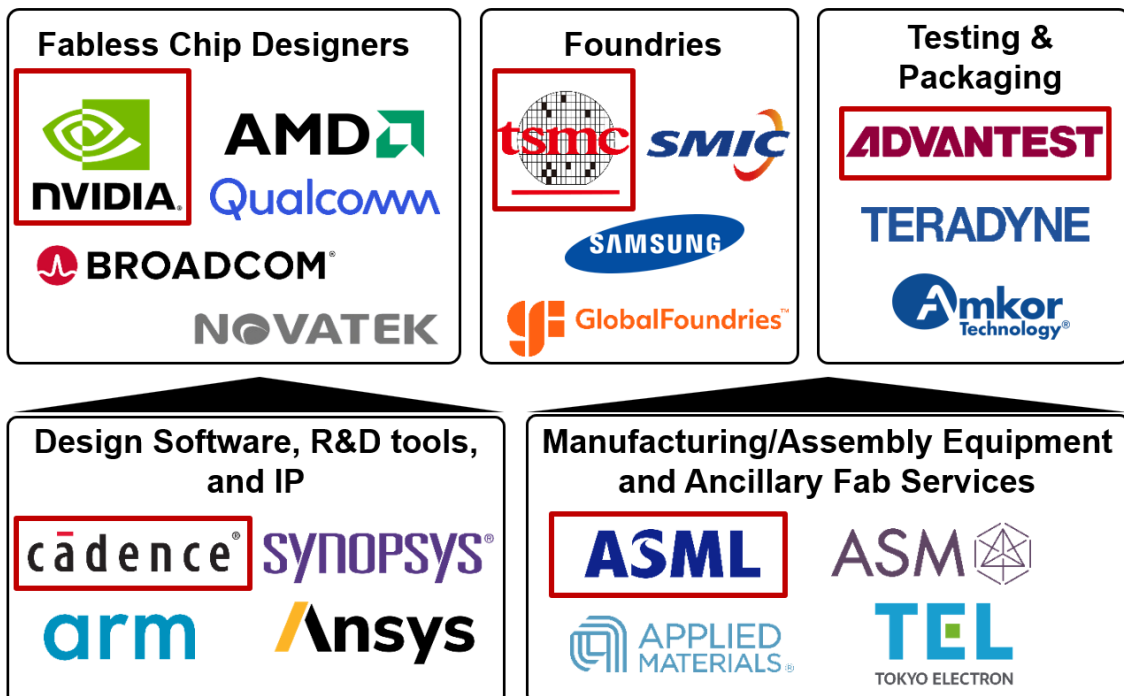
The first step, which comprises this deliverable, is an analysis of the semiconductor industry before focusing on a single company in the next phase. The focus of your analysis is to gain a comprehensive understanding of the segment and value chain. The analysis should contain the following, but not limited to:

- **Industry Overview**
  - Explain the industry
  - Describe growth history and TAM
  - Discuss the reasons behind the rapid TSR growth in recent years
  - Highlight current trends
- **Overview of Value Chain & Sub-Segments**
  - Explain each sub-segment's role in the value chain
  - Describe the importance of each sub-segment
  - Competitive landscape
- **Comparison of Industry Sub-Segments**
  - Identify each sub-segment's moat and competitive dynamics
  - Explain each sub-segment's growth profile
  - How do economics vary across verticals (e.g., Gross Margin, EBIT, ROIC)?
  - What are the differences in Capex investments per sub-segment?
- **Choosing a Sub-Segment to Further Evaluate in the Next Phase**

In the last category above, you will decide, based on both quantitative and qualitative factors, **which part of the value chain is better positioned to take advantage of the long-term trends you have identified in your analysis**. Your justification must be based on the <u>sub-segment positioning/trends, not on any specific company.</u>

Delivery format: you must produce **a PowerPoint presentation (saved in PDF), with no more than five pages of content (and only one exclusively dedicated to the selection of the <u>sub-segment</u>) and an explanatory video of up to 4 minutes** bringing the main points of the industry analysis (delivery format detailed in the Regulation – read carefully). Please note that managers appreciate slides that deliver clear and precise insights directly aligned with the purpose of the presentation.

If your group advances to the next phase, you will be asked to conduct a deeper analysis of a selected company within the chosen sub-segment. The selected candidates are:

- Fabless Chip Designers: **NVIDIA (NVDA-US)**
- Foundries: **TSMC (TSM-US)**
- Testing & Packaging: **Advantest (ADTTF-US)**
- Design Software, R&D tools, and IP: **Cadence (CDNS-US)**
- Manufacturing/Assembly Equipment and Ancillary Fab Services: **ASML (ASML-US)**

<u>At the current stage, however,</u> <u>you must not focus on any of these companies specifically.</u>

Good luck!