

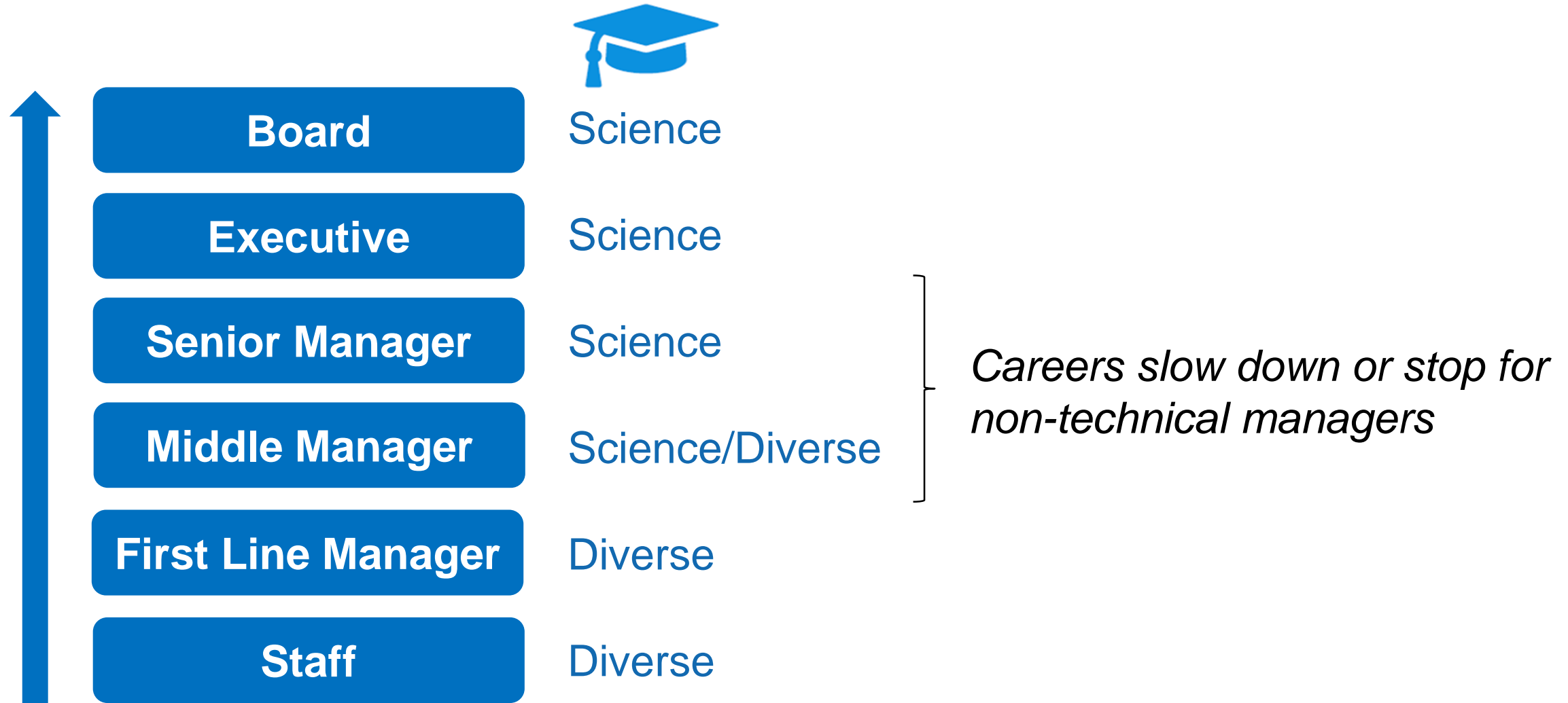


# MAS in Applied Technology (MAS AT) Concept and Programme

# Developed in Response to Industry Request

- Problem: Lack of qualified candidates for senior management in technology companies
  - Science and technology qualifications are missing
  - Existing education and training options are inadequate

# Career Advancement in Technology Companies



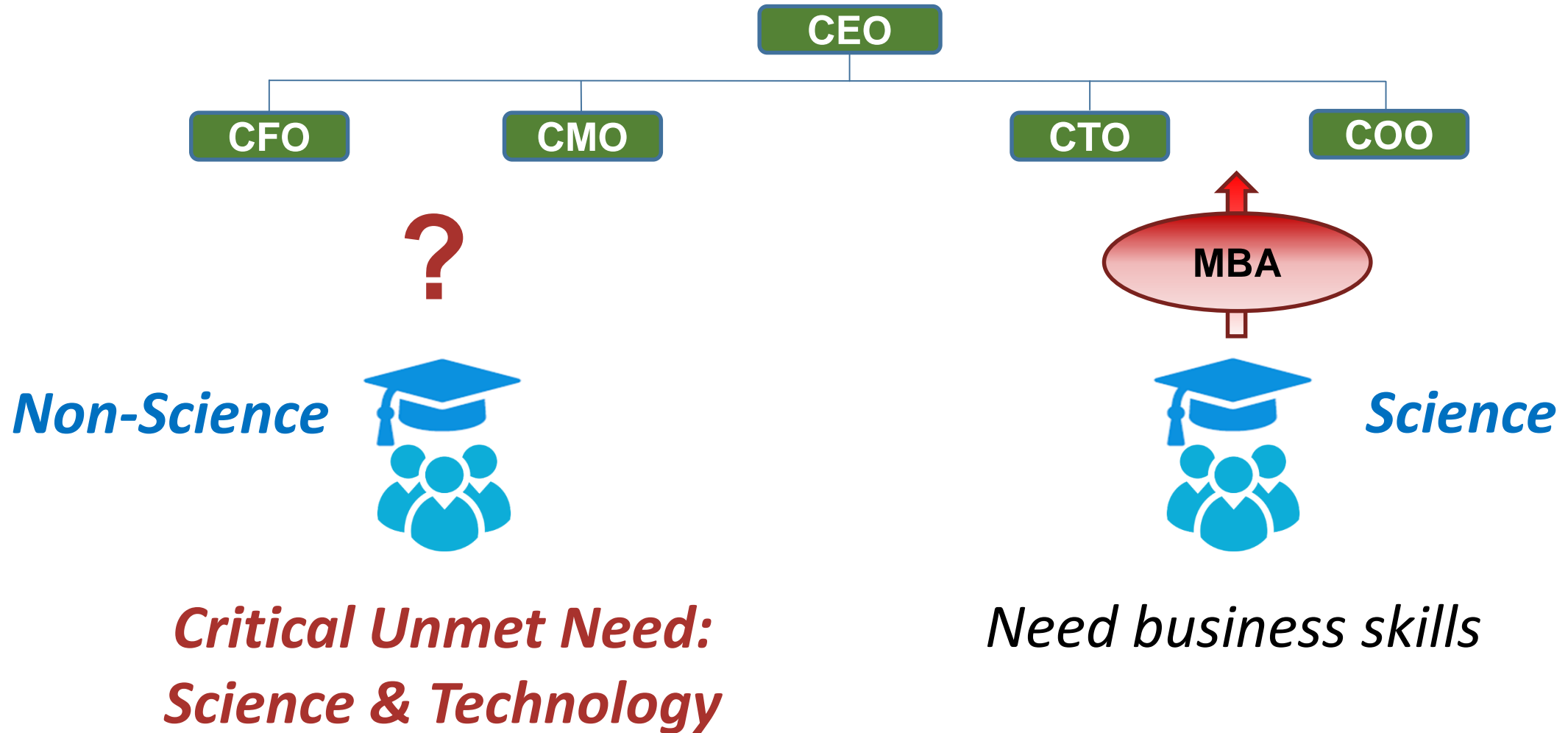
# 2016 LinkedIn Study of 459,000 Professionals

*“To be a C.E.O. or other top executive, **you need to understand** how the different parts of a company work and how they interact with each other and understand how other people do their job, **even if it’s something you don’t know well enough to do yourself.**”*

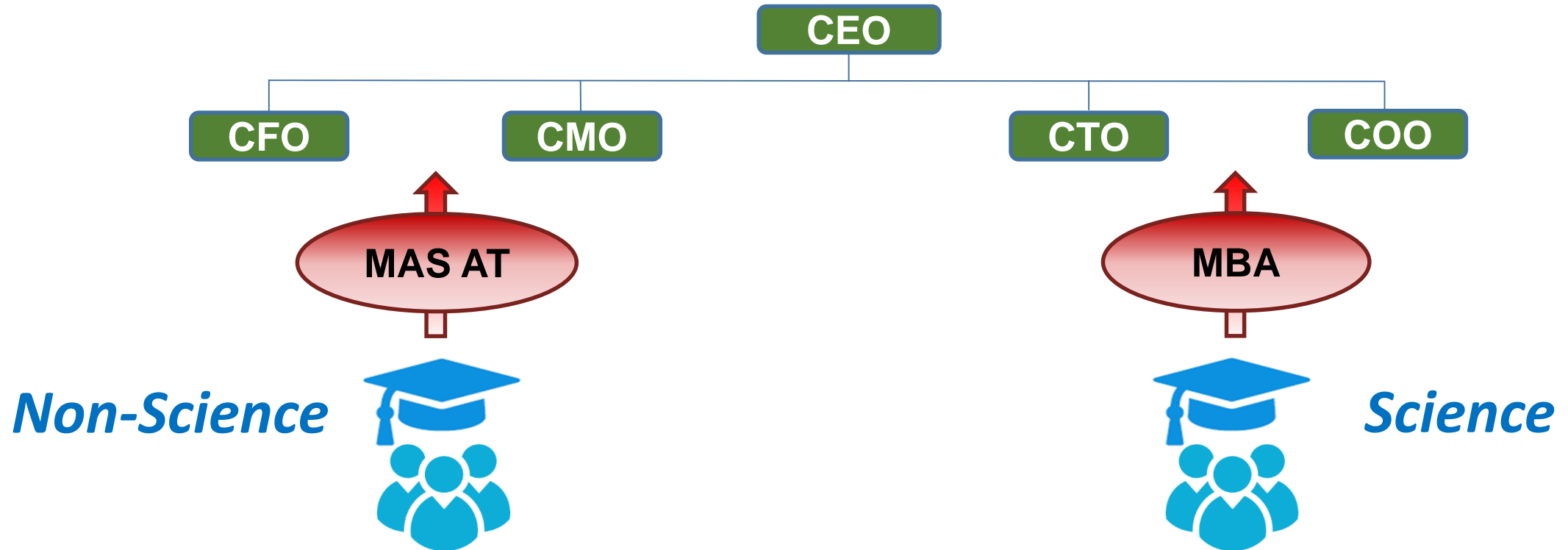
Guy Berger, Economist at LinkedIn



# Gap in Continuing Education Market



# Positioning as “Reverse” MBA



*Non-Science*

*Science*

*Provides science & technology knowledge  
and innovation skills*

# Programme Concept – Goals

- Continuing Education Degree Enabling Graduates to
  - Understand the scientific aspects behind the most important technologies in their industry
  - Collaborate more effectively with technical experts and managers in order to provide interdisciplinary, technology based solutions to industry problems
  - Better lead technical staff and technology-based companies

# Target Participants

- Experienced managers
- In technology companies or industries
- Non-science or single science Master's degree
- Promotion Potential



# Example Participant – Marketing Manager



12 years – Manufacturing

Manages groups in 3 EU countries

Masters in Marketing & Communication

## Supervisor & HR Feedback

- Next level will require more interdepartmental collaboration
- Should improve understanding of operations and engineering

## Personal Goals

- Improve product design
- Understand opportunities created by technology

# Example Participant – Finance Manager



6 years – Electronics Industry  
First Line Manager, Finance Dept.  
Masters in Finance

## Supervisor & HR feedback

- Excellent with numbers
- Look beyond the numbers and help the company be more innovative, especially in its use of technology

## Personal Goals

- Stronger relationships with technical managers in the business unit
- Not feel lost in technical conversations

# MAS AT Program Structure

MAS	Applied Technology	66 ECTS
CAS 1	Applied Information Technology	12 ECTS
CAS 2	Applied Manufacturing Technology	12 ECTS
CAS 3	Applied Technology Elective*	12 ECTS
CAS 4	Applied Technology: R&D and Innovation	10 ECTS
Experimental Project		10 ECTS
Master's Thesis		10 ECTS

*\* Participants select from available options; subject to change*

# MAS AT Study Plan – First Round

*September - December*

*January - April*

*April - July*

*2019-  
2020*

**CAS 1**  
Applied Information  
Technology

**CAS 2**  
Applied Manufacturing  
Technology

**CAS 3**  
Applied Technology in  
Energy (Elective)

*2020-  
2021*

**CAS 4**  
Applied Technology:  
R&D and Innovation

**Experimental Project**

**Master's Thesis**

# CAS 1 – Applied Information Technology

## E-tutorials (14 weeks)

**Foundations of  
Computer Science  
(3 ECTS)**

## Block Format (4 weeks each)

**Data Science  
(3 ECTS)**

**Humans and Machines  
(3 ECTS)**

**Applied Information  
Technologies  
(3 ECTS)**

# Experimental Project

- Goal
  - Explore and improve understanding of a specific technology application
  - Better appreciation of typical problems during technology development
- Project Options
  - ETH supervised project
  - Participant designed (with prior written approval of Advisor and ETH Lab)
- ETH Advisor
  - Assigned based on project selection
  - Meet during CAS 4 for advance planning

# Master's Thesis

- Subject
  - Evaluate a technology application to solve a real industry problem
  - Problem and technology freely selectable (with Advisor approval)
  
- Key Points
  - Integrative of material and skills learned in programme
  - Must be sufficiently rigorous from science and technology perspective
  - Other information (policy, market, etc.) should be context only, not primary focus
  - Start early!
  
- ETH Advisor
  - Ideally, same advisor as experimental project
  - Meet during CAS 4 for advance planning

# Further Information

## Website

[www.mas-at.ethz.ch](http://www.mas-at.ethz.ch)

## Contact

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