

# ANALYSIS OF THE IMPACT OF THE CONCLUSION OF THE COLLABORATIVE PROFESSIONAL MASTER'S PROGRAM ON EMBRAER AND ITA

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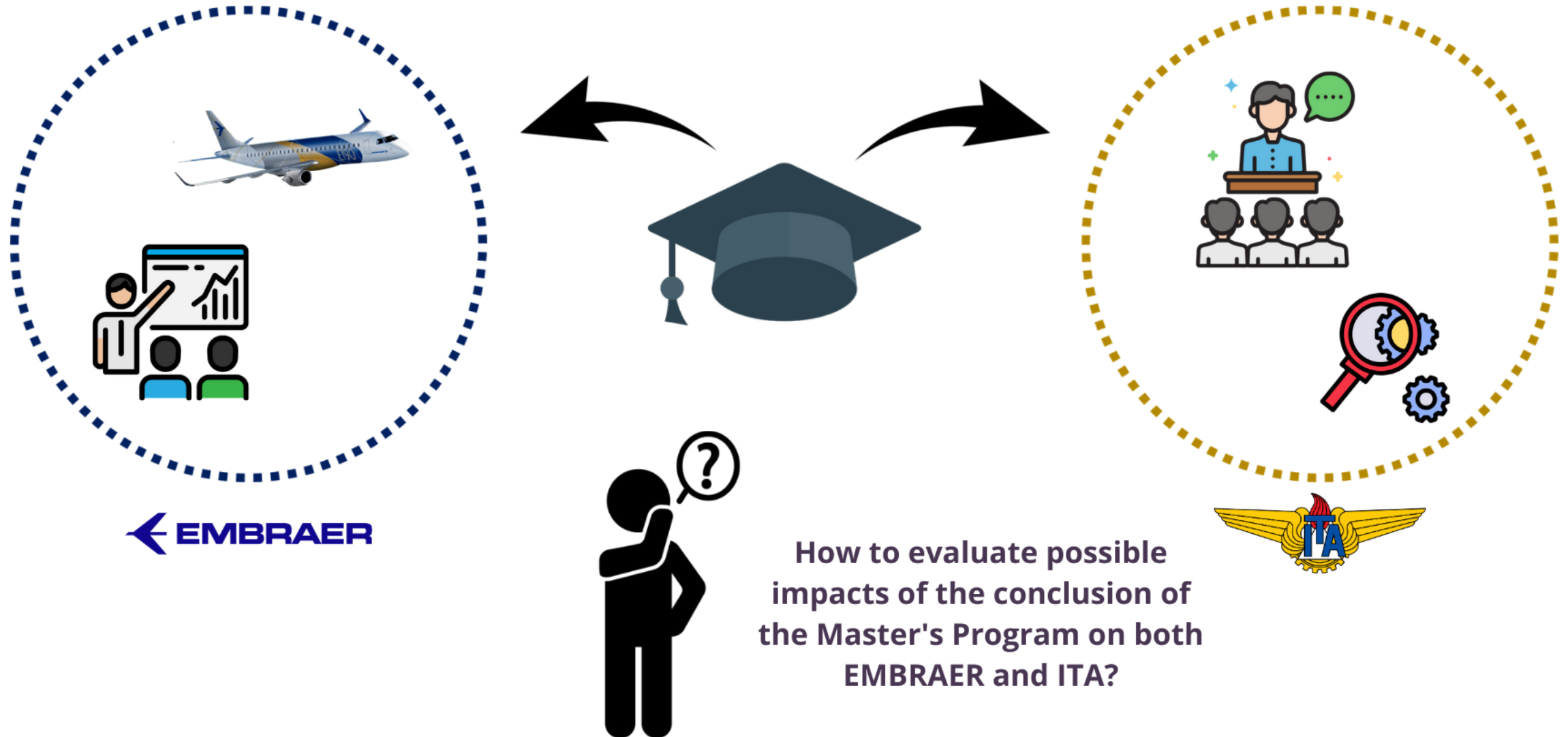


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STOCKHOLM, OCTOBER 9TH 2019

# IMPACTS



**INTRODUCTION**

**METHODOLOGY**

**RESULTS**

**COMMENTS & CONCLUSIONS**

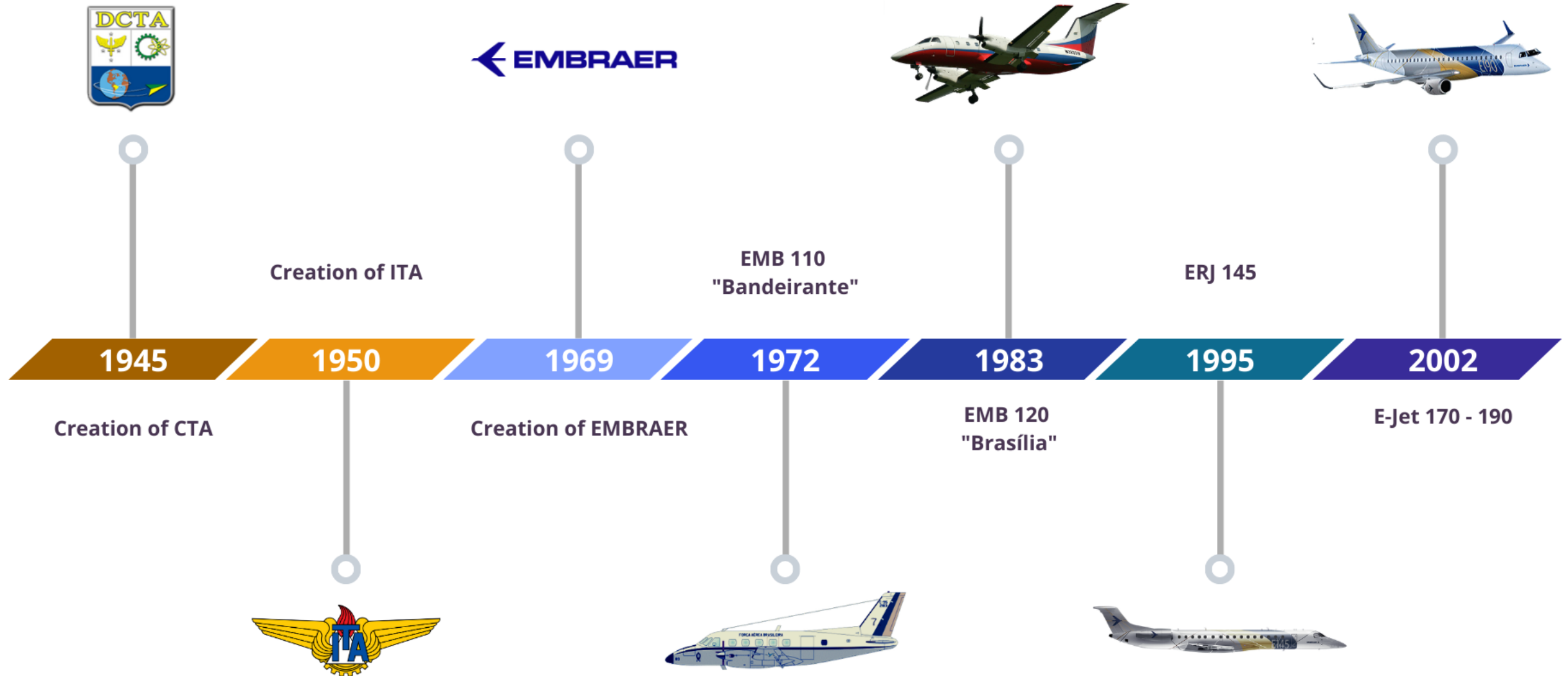
**REFERENCES**

# **Table of Contents**

# INTRODUCTION

# INTRODUCTION

Since the creation of EMBRAER,  
there has been a new commercial  
aircraft each decade



# INTRODUCTION



2002

Since 2002, the PEE comprises a  
Professional Master's Program of ITA  
in partnership with EMBRAER

## INTRODUCTION

**1500 +  
ENGINEERS**

HAVE PARTICIPATED  
IN THE PROGRAM

Total number of participants since the  
begining of the program

**26  
CLASSES**

WERE HIRED  
UNTIL 2019

**76%  
OF RETENTION**  
OVER THE LAST 6 YEARS

# SELECTION PROCESS

The selection process  
of PEE consists of four  
different parts



APPLICATION



ONLINE TEST:  
ENGLISH / LOGIC



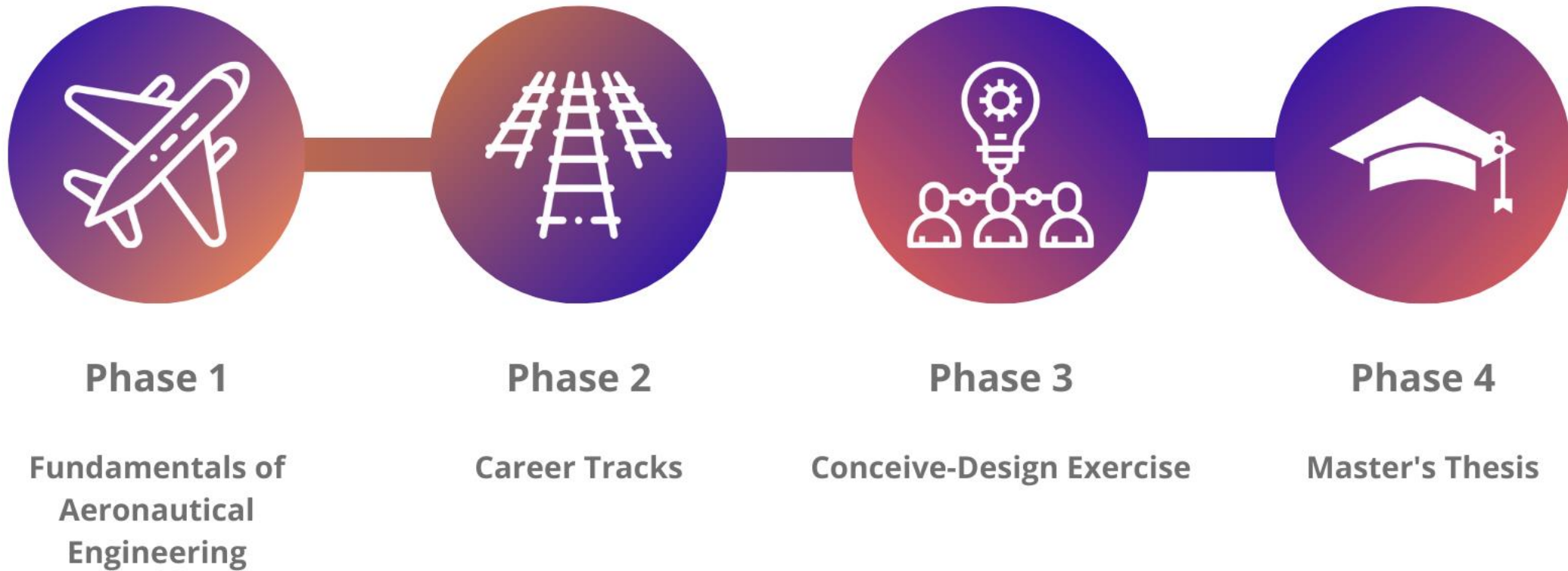
WRITTEN EXAM  
TECHNICAL / ENGLISH



INTERVIEWS



# INTRODUCTION



# INTRODUCTION



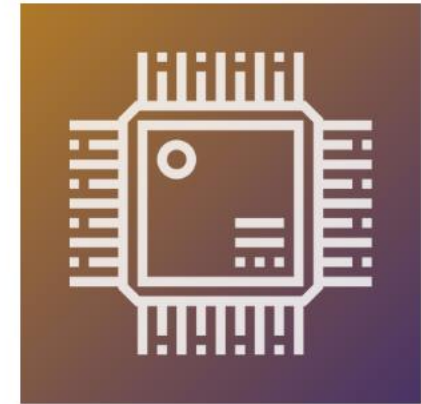
STRUCTURES



MANUFACTURING



MAINTAINABILITY



SYSTEMS

**Currently there are four different career tracks in which the students can be specialized during Phase 2**

## PHASE 3 - SOCIAL-TECHNICAL INTEGRATION



The Phase 3 of the program consists in a conceive-design exercise in which the students are mentored by experienced engineers of the company and also former employees



## PHASE 3 - DELIVERABLES



The Class 26 was divided in two different teams, each presented to a specific challenge





## PHASE 4 - MASTER'S THESIS

Some of the main Technology Areas according to the ASTERA taxonomy in which the Master's theses have been developed



## ASTERA TAXONOMY



AIRCRAFT AVIONICS, SYSTEMS  
AND EQUIPMENT



INNOVATIVE CONCEPTS AND  
SCENARIOS



AEROSTRUCTURES

# INTRODUCTION



**The main objectives of  
the present study**



**Impact on the  
company**



**Alumni's performance  
in their work**



**Impact on ITA**

# **METHODOLOGY**

# METHODOLOGY

## case study research



Documents



Interviews



Questionnaires

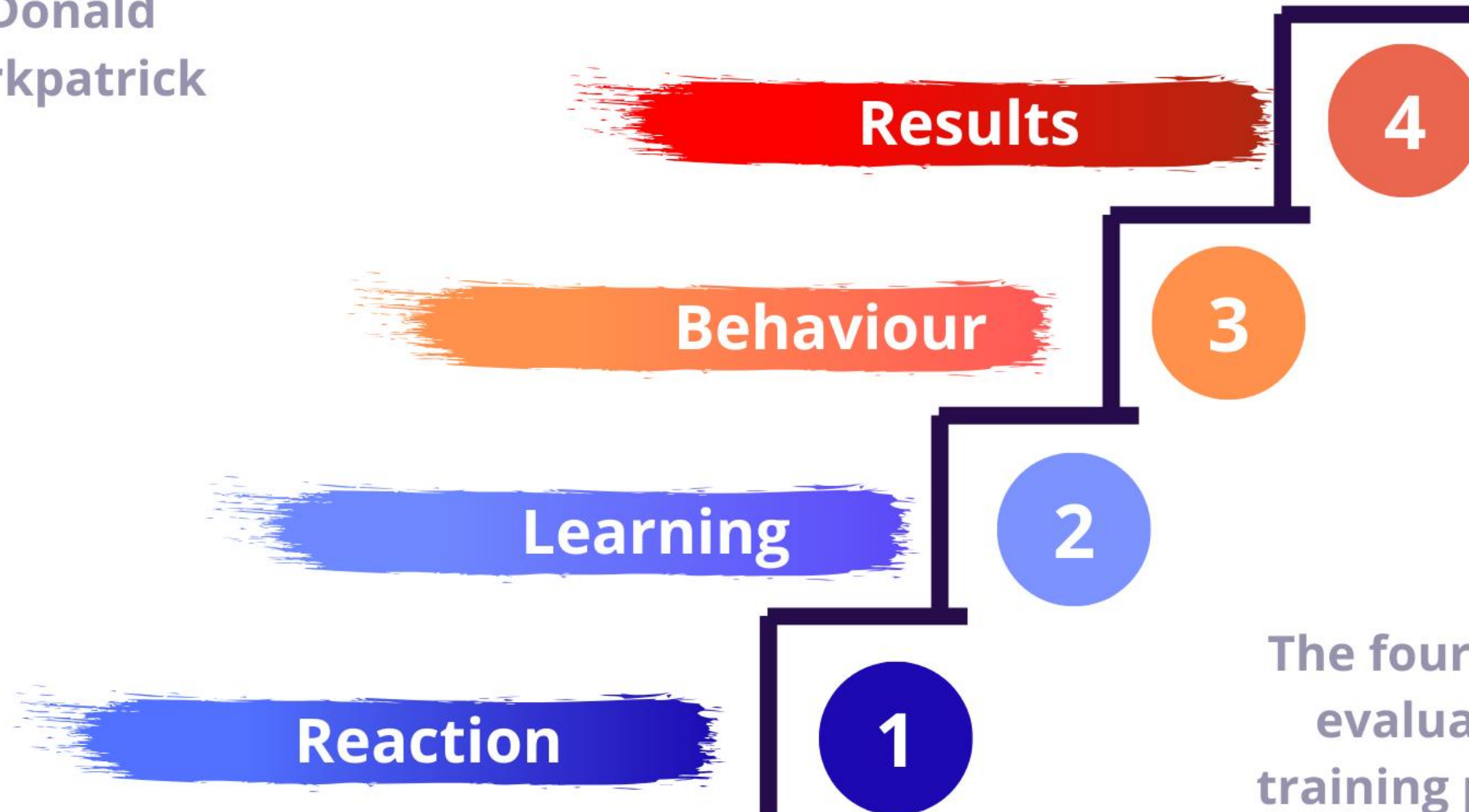


Observation



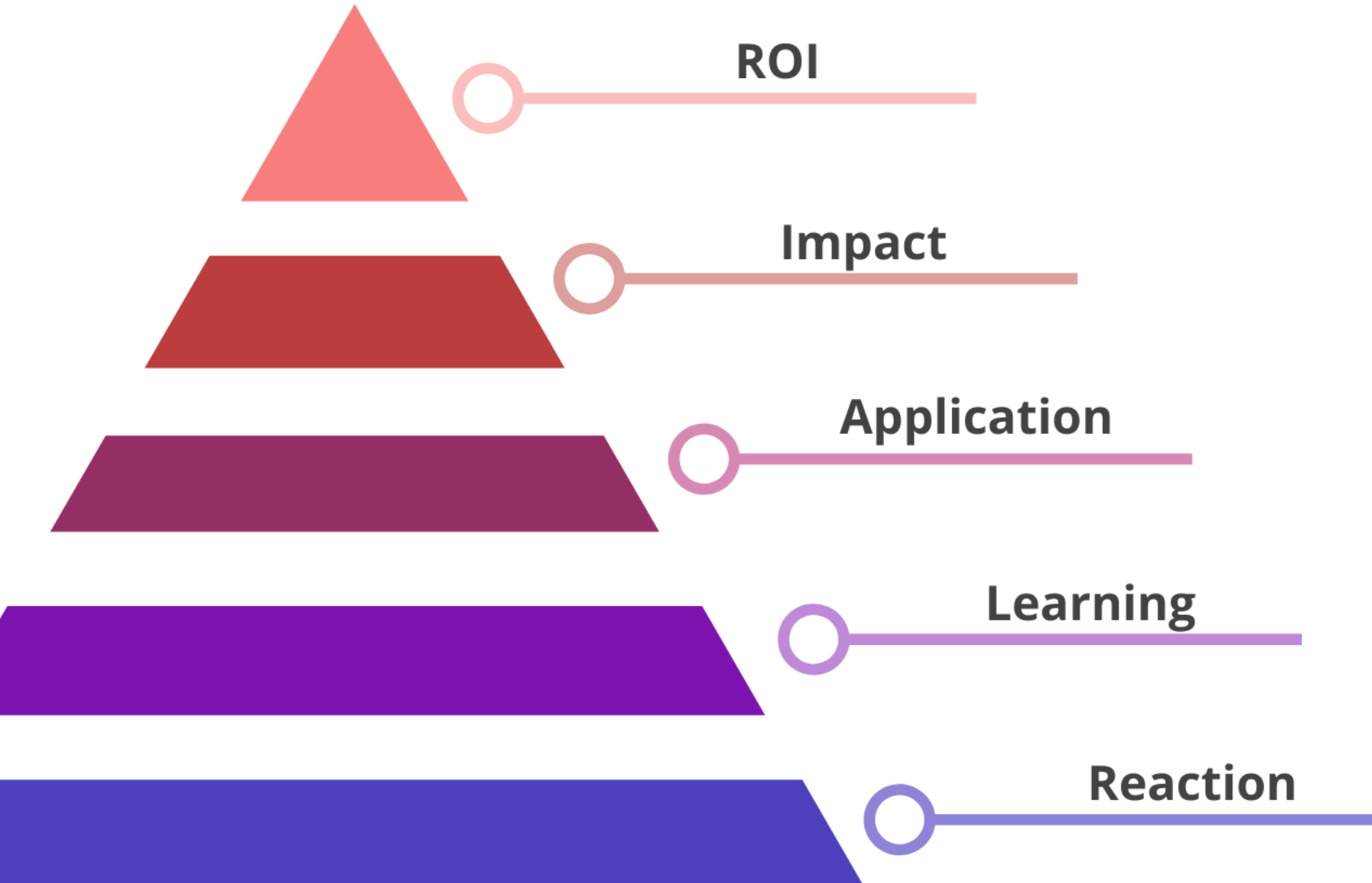
# METHODOLOGY

Donald  
Kirkpatrick



The four levels of  
evaluation of  
training programs

## METHODOLOGY



Phillips

Evaluation of training  
considering also the  
Return of Investment  
(ROI)

**This paper focuses  
on the Impact level**

## METHODOLOGY

The main groups of stakeholders  
whose perception was considered  
for the present study



Alumnus



Supervisor

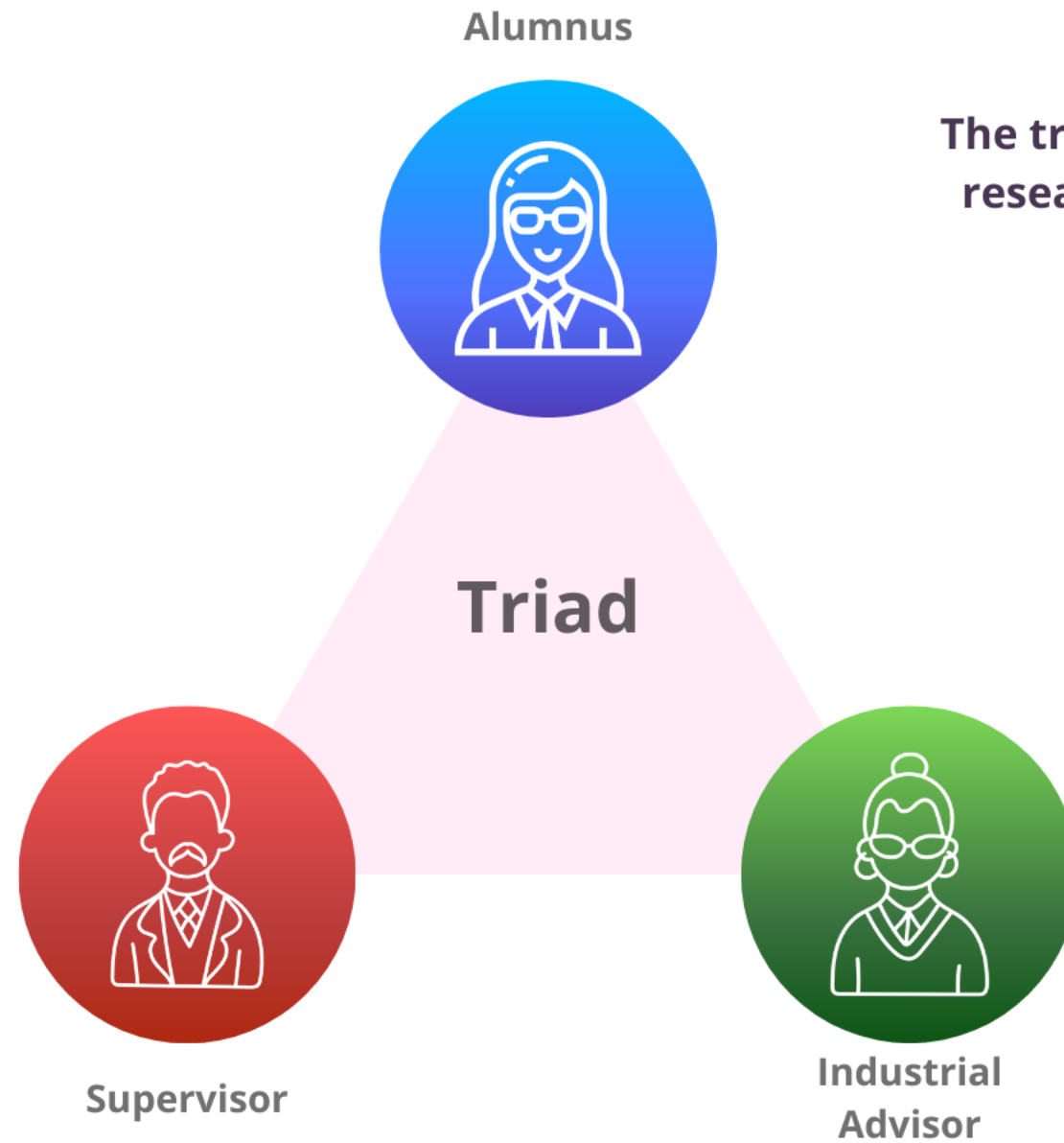


Industrial  
Advisor



Academic  
Advisor

# METHODOLOGY



The triad considered during the research of the present study

# METHODOLOGY

## Part 1 (PRETEST)



1

Triads selection



2

Interviews  
Outline



3

Interviews

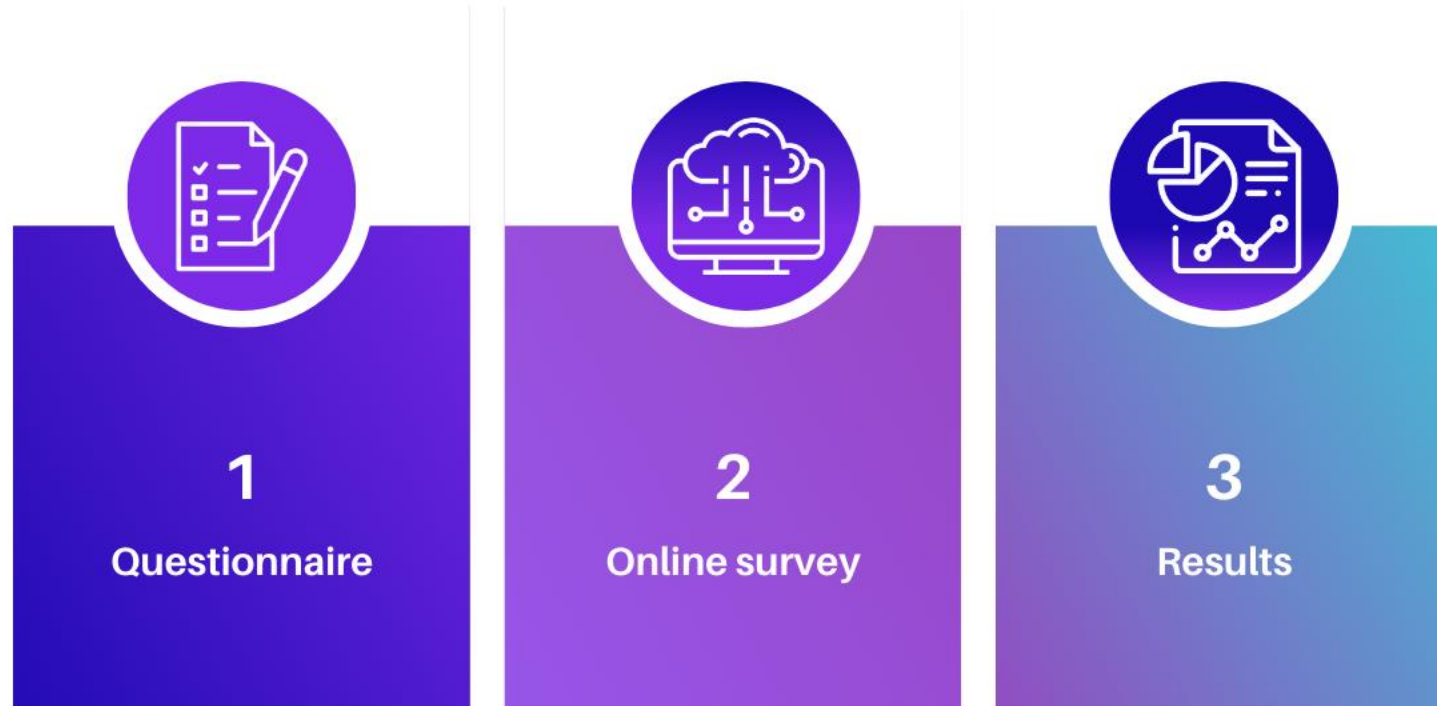


4

Results

# METHODOLOGY

## Part 2



# METHODOLOGY



Identification of  
the repondent



Contributions to  
their personal skills



Contributions to their  
work in their sector



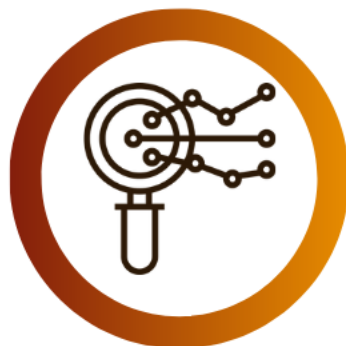
Impacts in the  
company



# METHODOLOGY



Conduction of  
undergraduate  
programs



Research lines in  
graduate programs



Cooperative research  
projects and funding

The main focuses of the  
questionnaires for ITA  
Professors



\* Ministry of Education





## METHODOLOGY

Out of the results of the open questions from the pretest, closed questions were elaborated



Open  
questions



Closed  
questions

# RESULTS

## RESULTS



Alumnus



Industrial  
Advisor



Supervisor

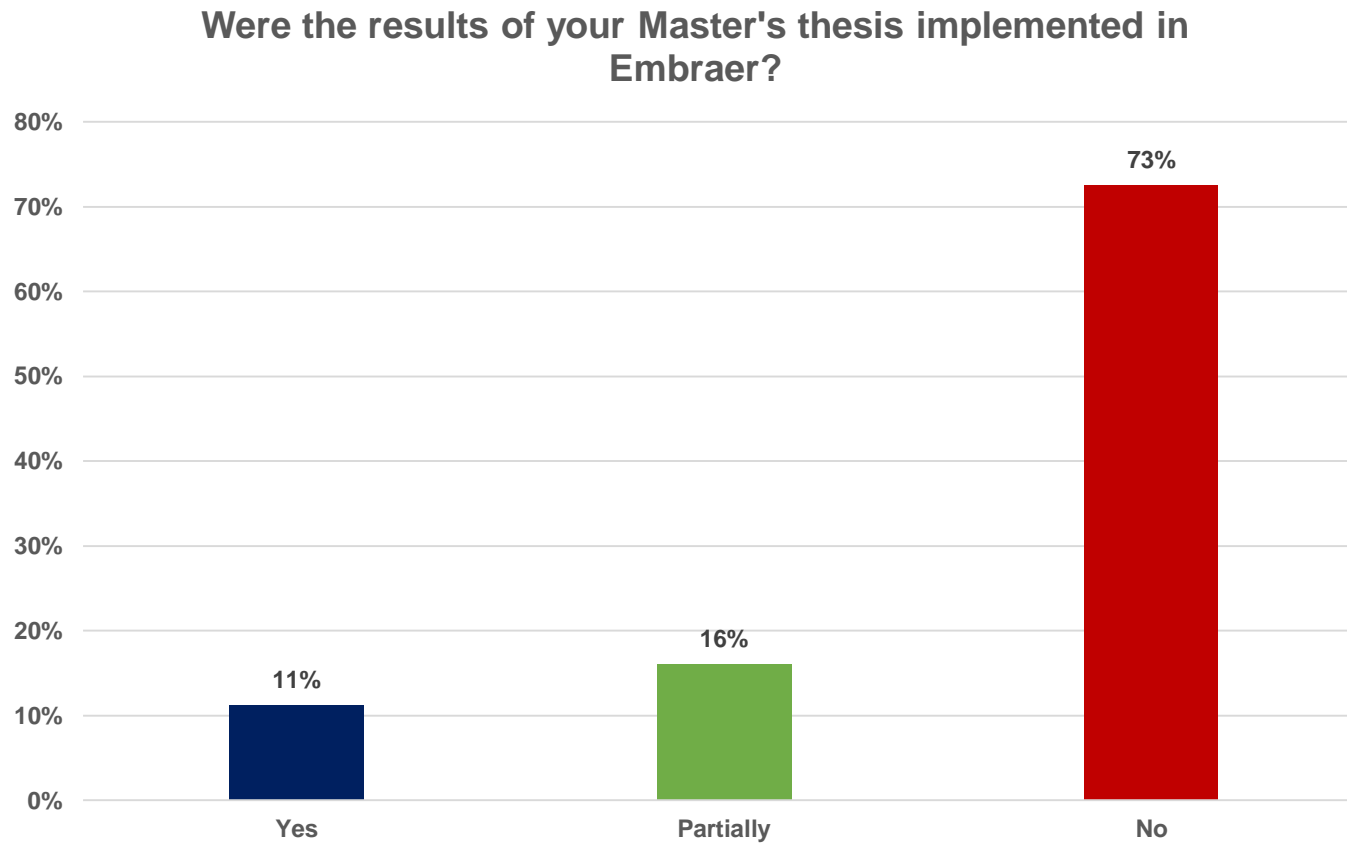


Academic  
Advisor



Total of respondents of each group

# RESULTS



implementation



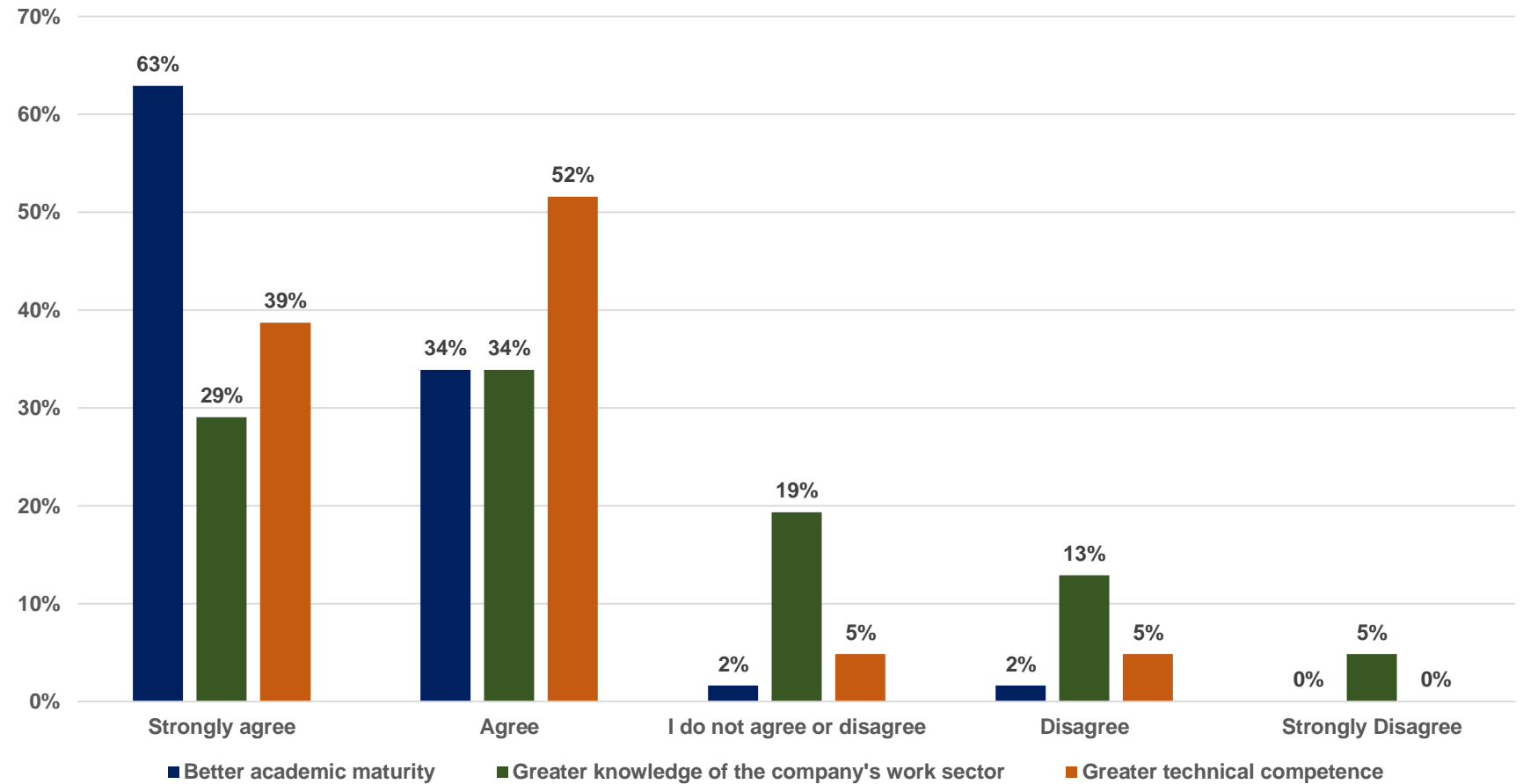
Alumnus

# RESULTS



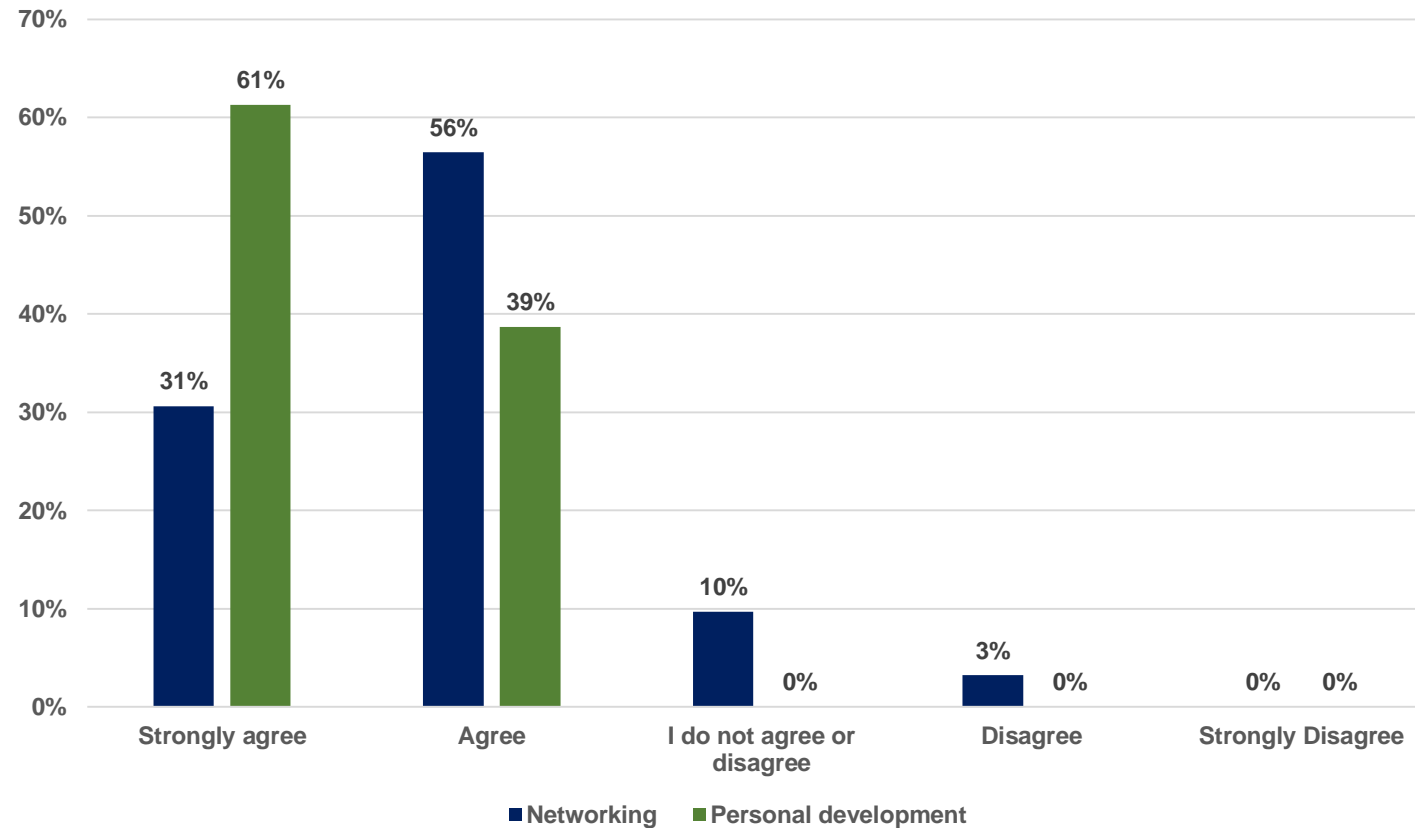
Alumnus

The conclusion of the Master's thesis provided me:



# RESULTS

The conclusion of the Master's thesis contributed to my following personal aspects:



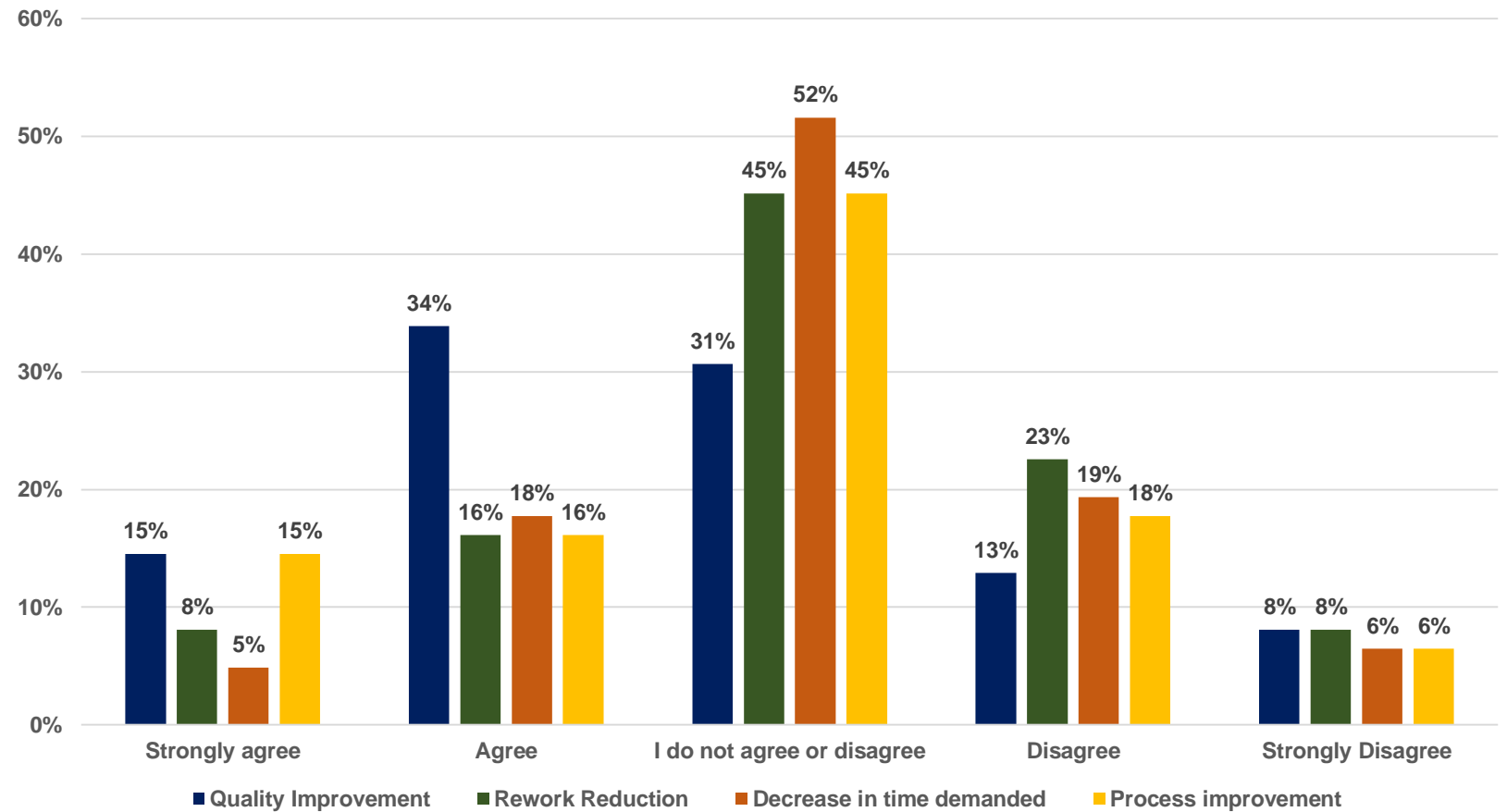
Alumnus

# RESULTS



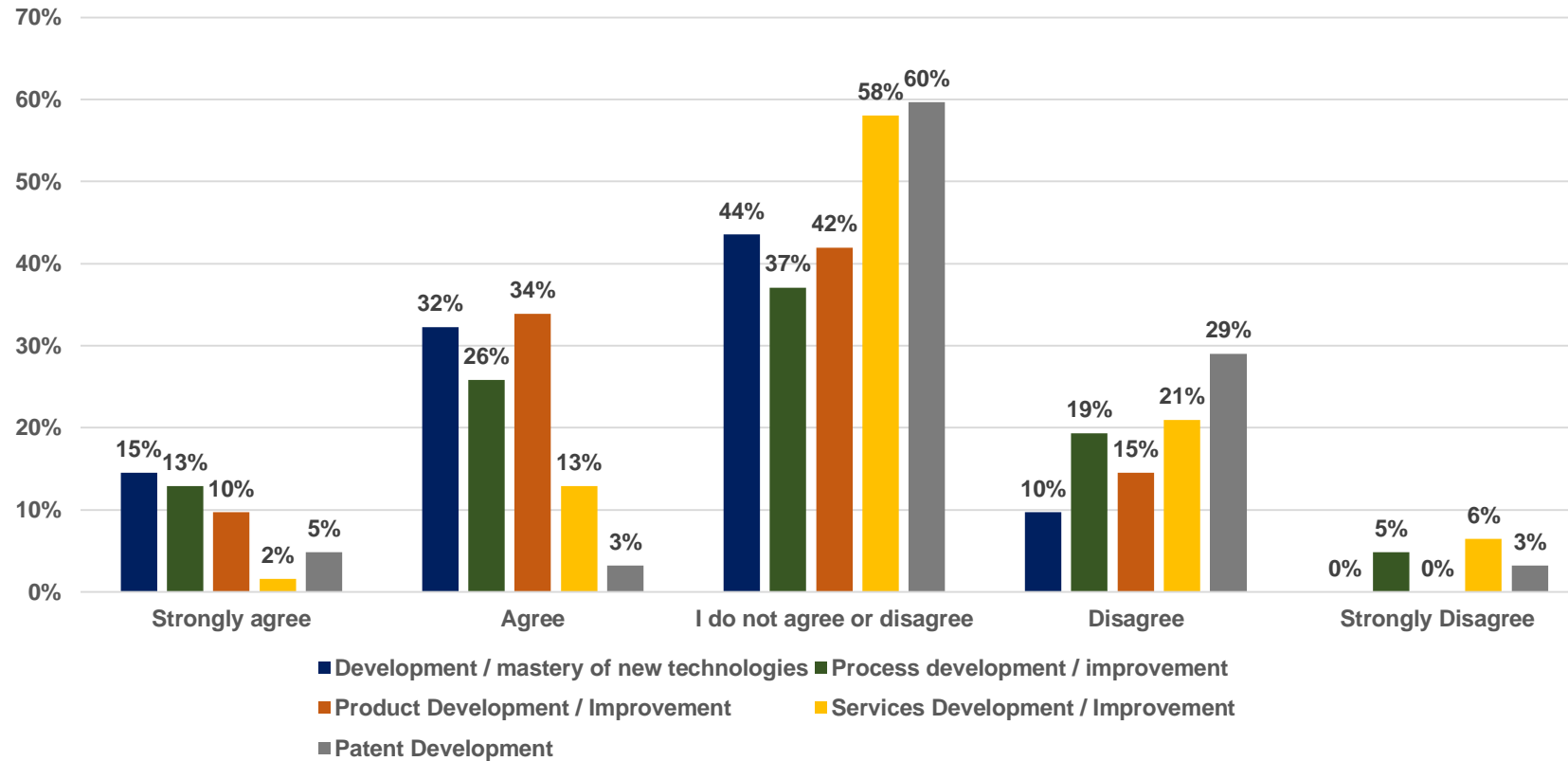
Alumnus

The conclusion of the Master's thesis contributed to the following aspects of my work in my sector:



# RESULTS

If implemented at Embraer, the results of my Master's thesis would impact the company on:



Alumnus

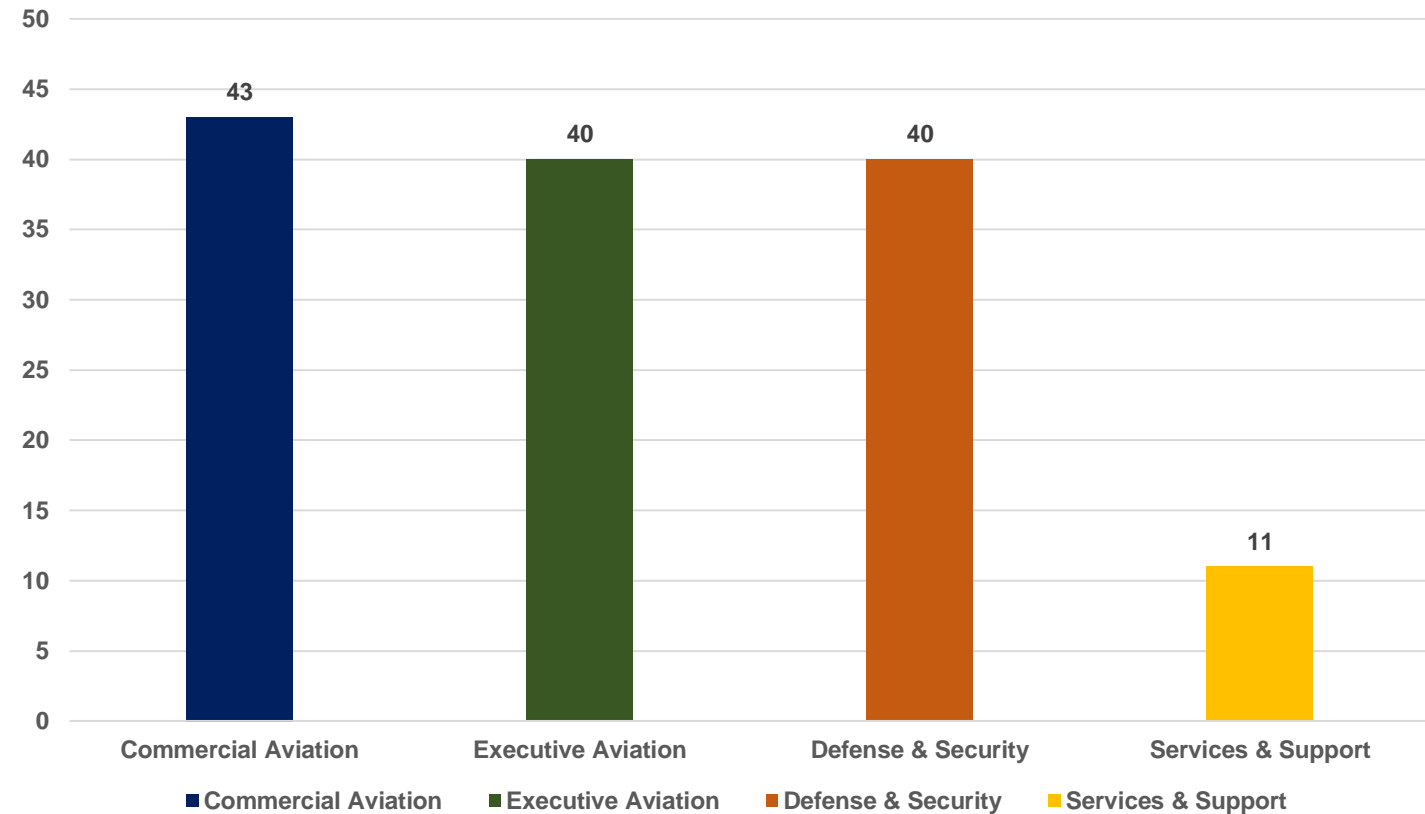


# RESULTS



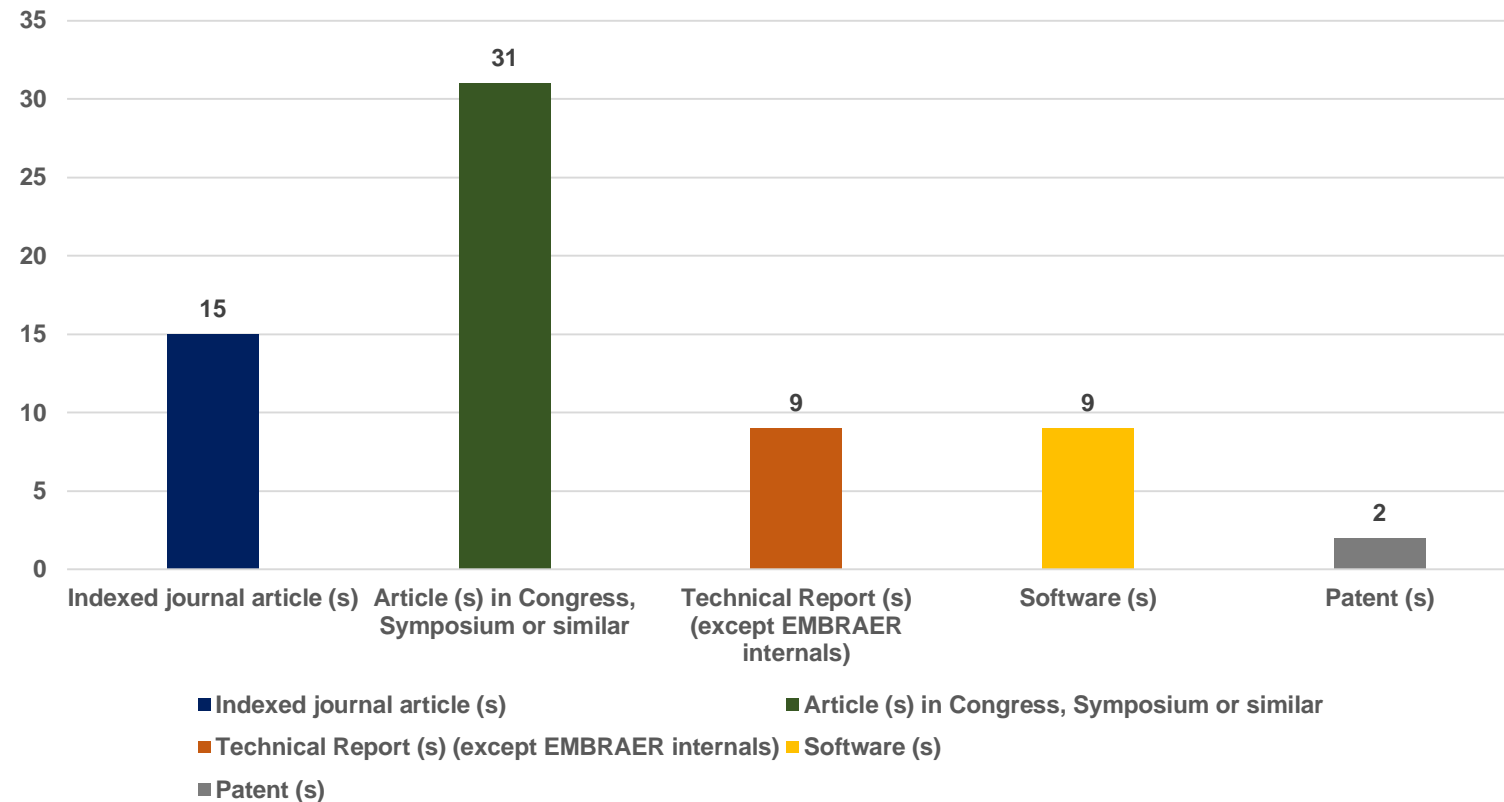
Alumnus

Indicate the Business Units in which the results of your Master's thesis had / could have some impact:



# RESULTS

Indicate which scientific productions below had a direct or indirect relationship with your Master's thesis



Alumnus

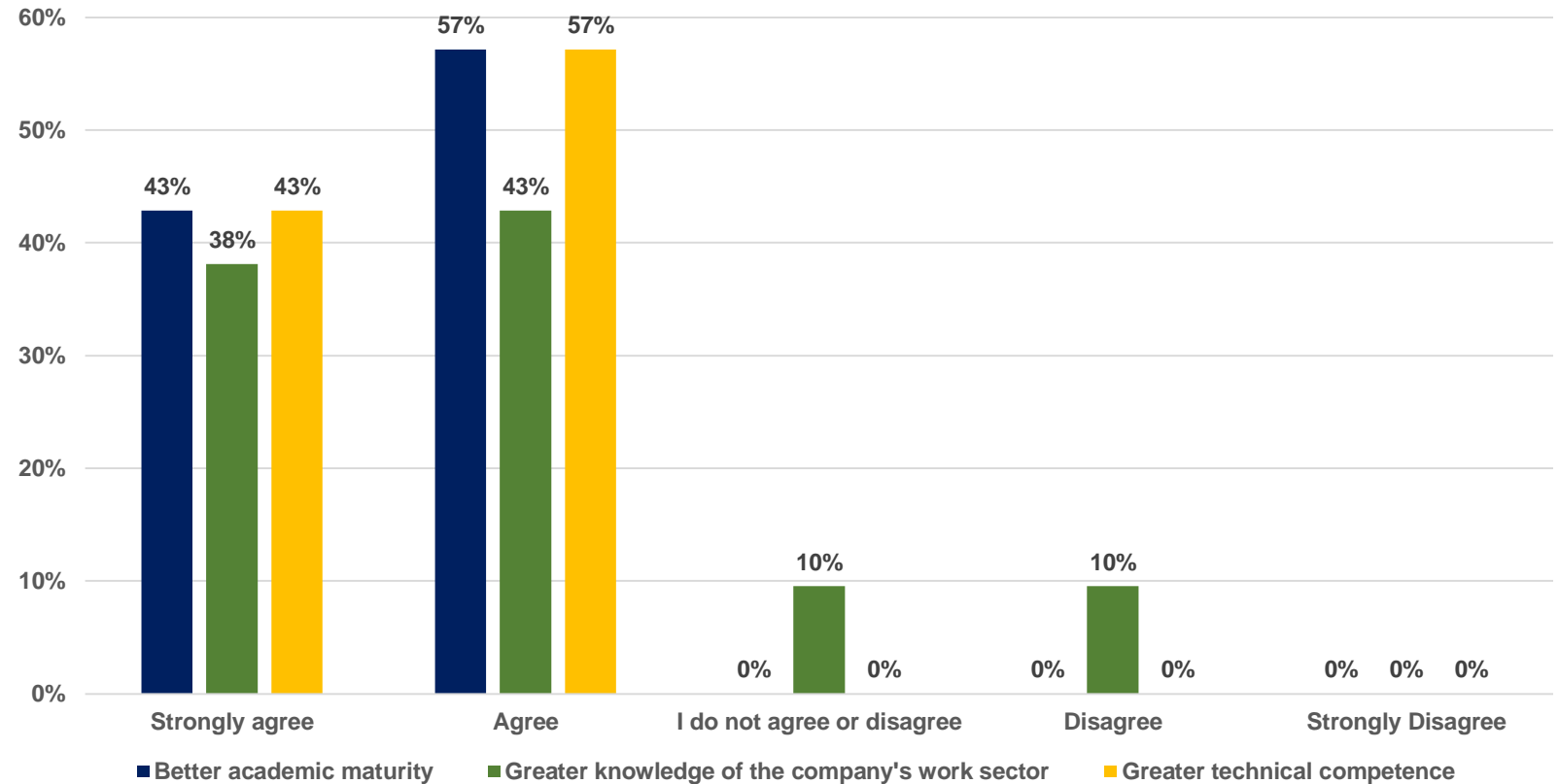
# RESULTS

contributions



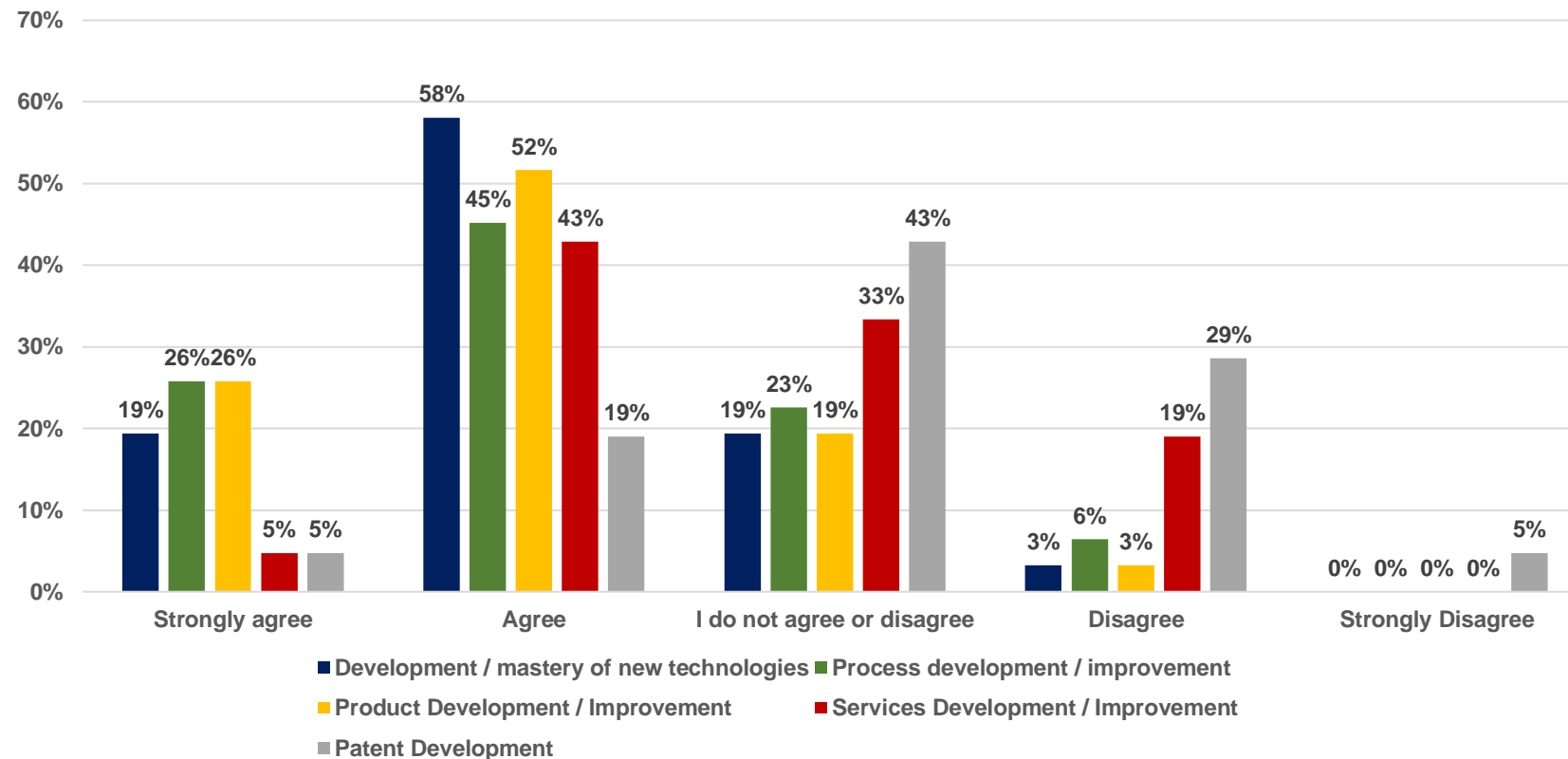
Industrial  
Advisor

The conclusion of the Professional Master's Program provided my oriented student:



# RESULTS

If implemented at Embraer, the results of the Professional Master's of my oriented student would impact the company on:



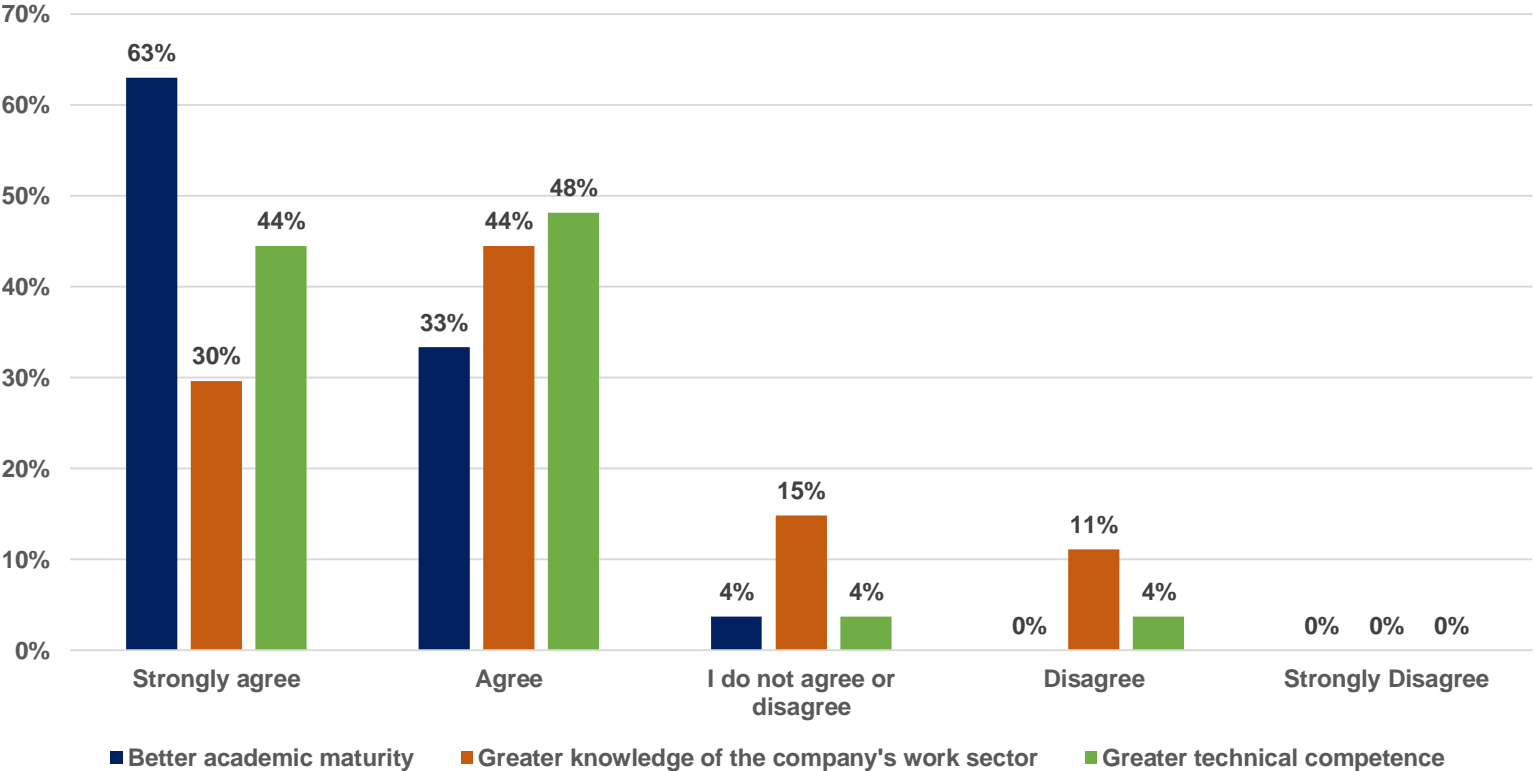
Industrial  
Advisor

# RESULTS



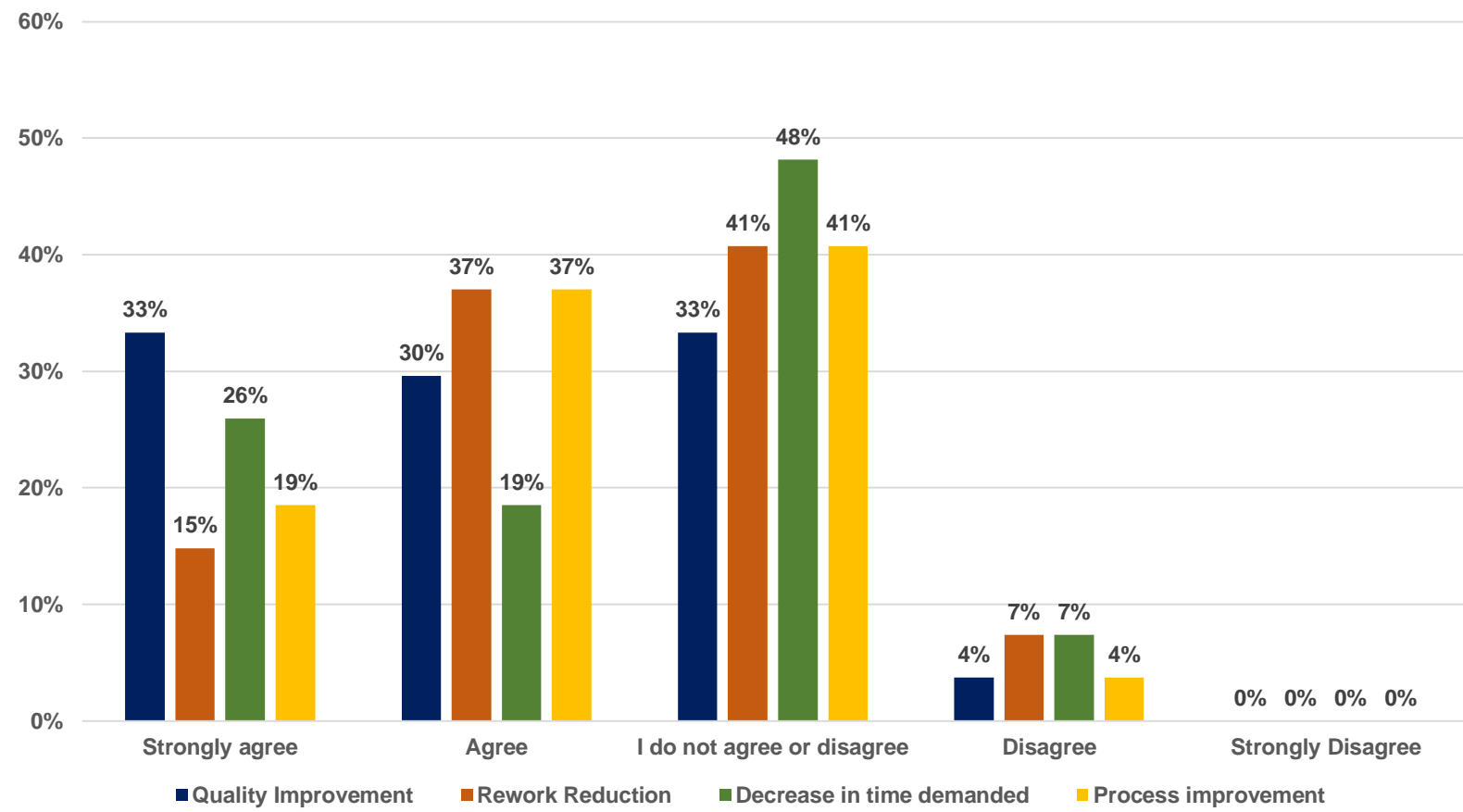
Supervisor

The conclusion of the Professional Master's Program provided my employee:



# RESULTS

The completion of the Professional Master's Program contributed to the following aspects of my employee's work in our sector:



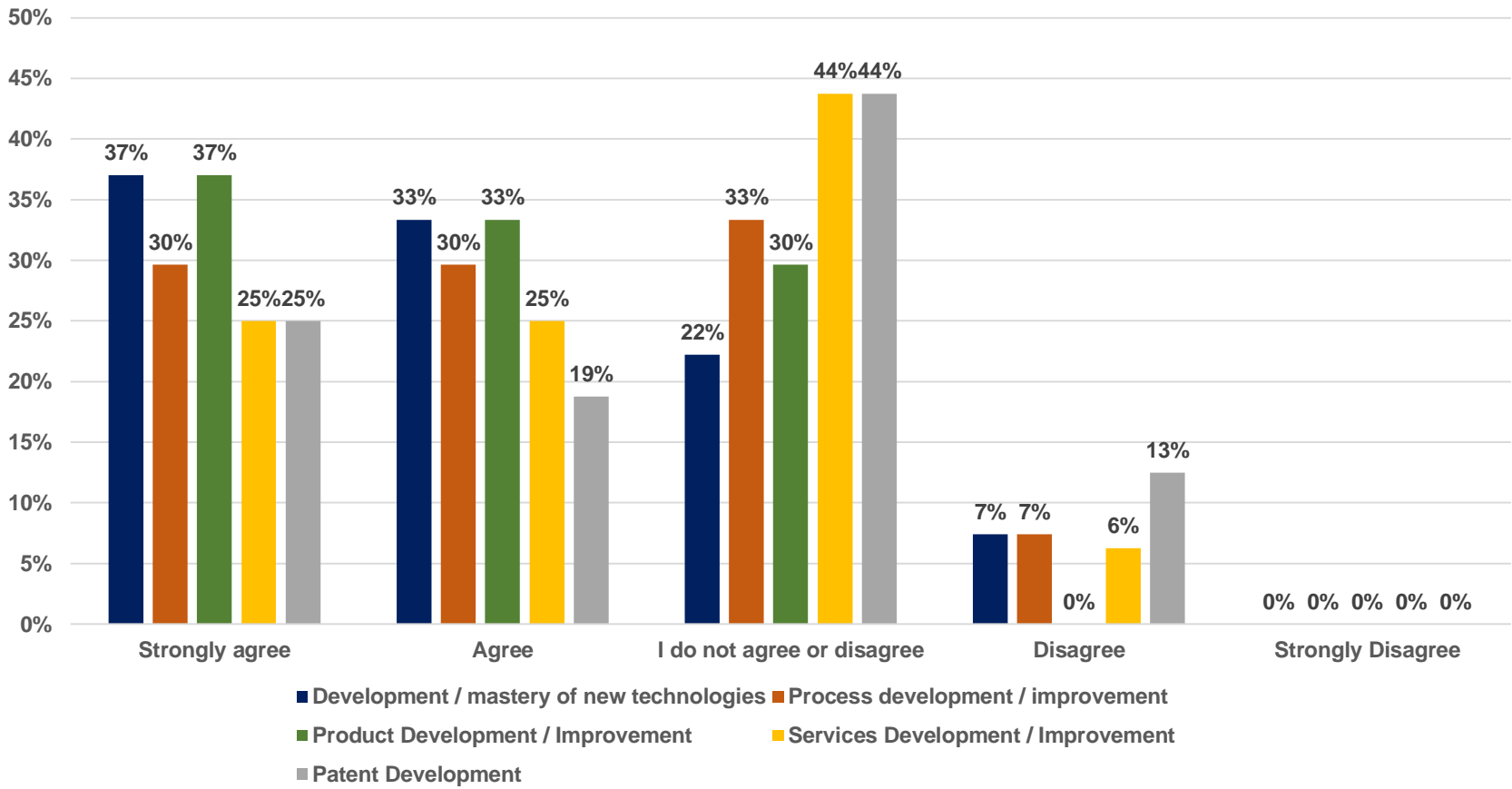
Supervisor

# RESULTS



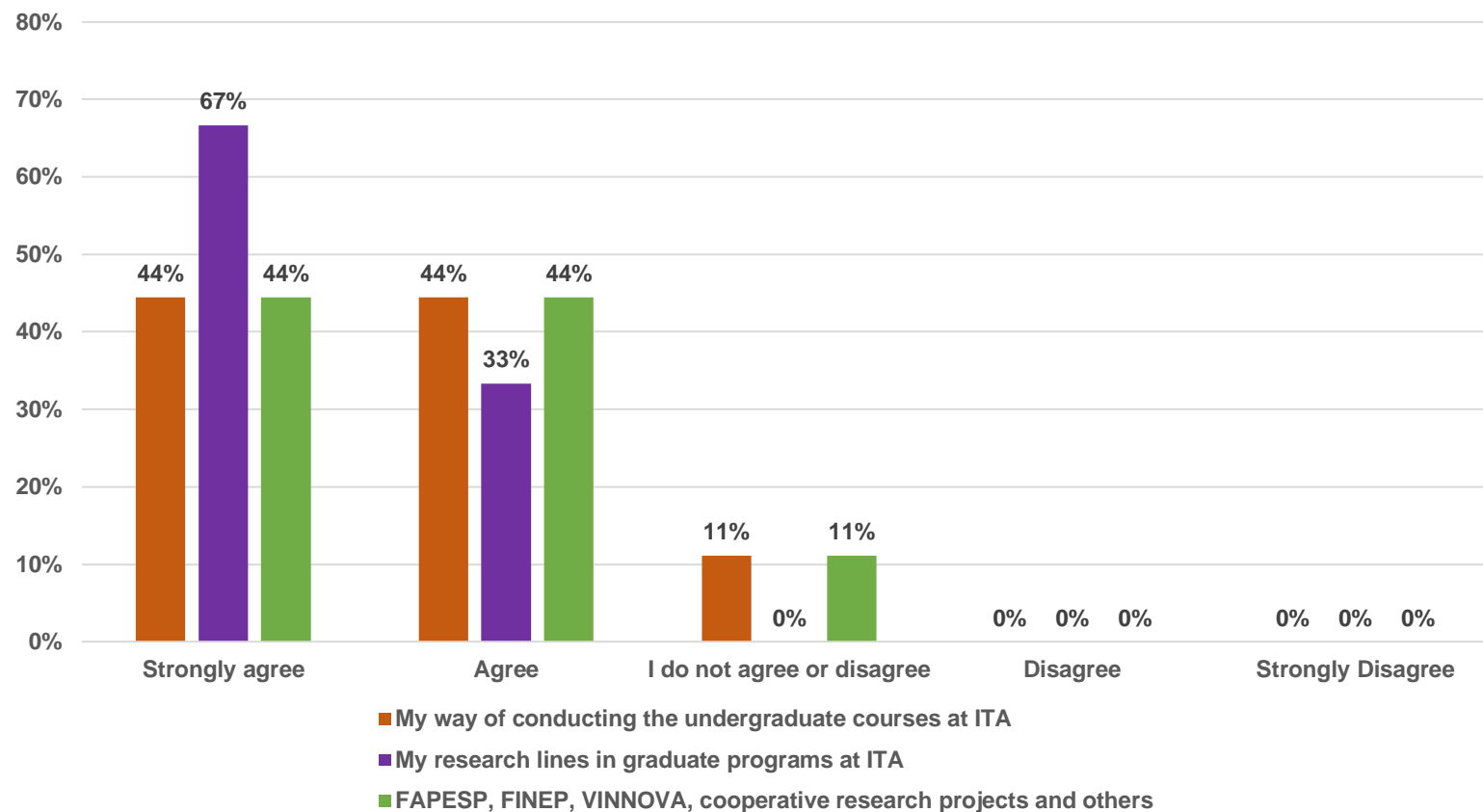
Supervisor

If implemented at Embraer, the results of the Professional Master's of my employee would impact the company on:



# RESULTS

My participation as a Professor in the Professional Master's Program with EMBRAER influenced



impacts



Academic  
Advisor



# **COMMENTS & CONCLUSIONS**

## COMMENTS & CONCLUSIONS



Positive outcomes  
for both EMBRAER  
and ITA



Achievement of the  
objectives



Perception of the  
respondents



Strong influence of the PEE alumni  
on the quality of the products of  
the company



Positive impacts on Education and  
Research at ITA



Good agreement between the  
Industrial Advisors and the  
Supervisors

## PERCENTAGE OF PEE ALUMNI



34%



55 %

33%



25%

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# THANK YOU

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