



TEMSA

**TEMSA &
Çukurova University
Collaboration**

2021

**Social Return on Investment
(SROI)
Report**

MİKADO

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Glossary of Terms

Activity: An action or effort carried out to create change for key stakeholders.

Attribution: An assessment of how much of an outcome is the result of the activity or intervention of the organization under review, and how much is due to other organizations or interventions.

Beneficiaries: People, groups or organizations that are intended to experience change as a result of the activities.

Deadweight: An estimation of the amount of change that would have occurred without the intervention.

Displacement: An outcome created for a stakeholder group may unexpectedly displace the benefit experienced by another group. For example, decreased littering in a neighborhood park might only result in diverting littering to a park further down the road. Displacement considers the possibility that an activity has created unintended consequences for other stakeholders.

Drop-off: Relationship describing the causality between the initial intervention and the continued lessening (drop-off) of an outcome.

Duration: Duration that an outcome is assumed to last for after the initial intervention.

Inputs: Resources provided by each stakeholder group that are required to create the intervention.

Material: Outcomes which would affect the SROI result and decision-making processes are considered as material. They are considered immaterial otherwise.

Outcomes: Planned/unplanned and positive/negative changes that occur as a result of the intervention.

Outputs: Amount of activity communicated in numerical units.

Proxy: An approximation of value where an exact measure is not possible to obtain.

SDG: Sustainable Development Goal. The Sustainable Development Goals (SDGs), also known as the Global Goals, were adopted by the United Nations in 2015 as a universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity.

Social Return on Investment: SROI is an internationally recognized framework for understanding and measuring social value.

Stakeholders: Individuals and organizations that are affected by the activities of Temsa.

Theory of Change: Story about the sequence of events and changes that led to final outcomes for participants.

Valuation: Estimated monetary value to describe the worth of the outcome to stakeholders.

Value map: A supplementary spreadsheet for the SROI report, containing all the information and calculations used to determine the SROI generated by Temsa Projects.

Executive Summary

“I really believed in TEMSA and didn't apply anywhere else. From the beginning, I only wanted to work there. The location was very important and it was the best place to work in Adana. I knew it would be the place where I could learn the most.”

Temsa Intern

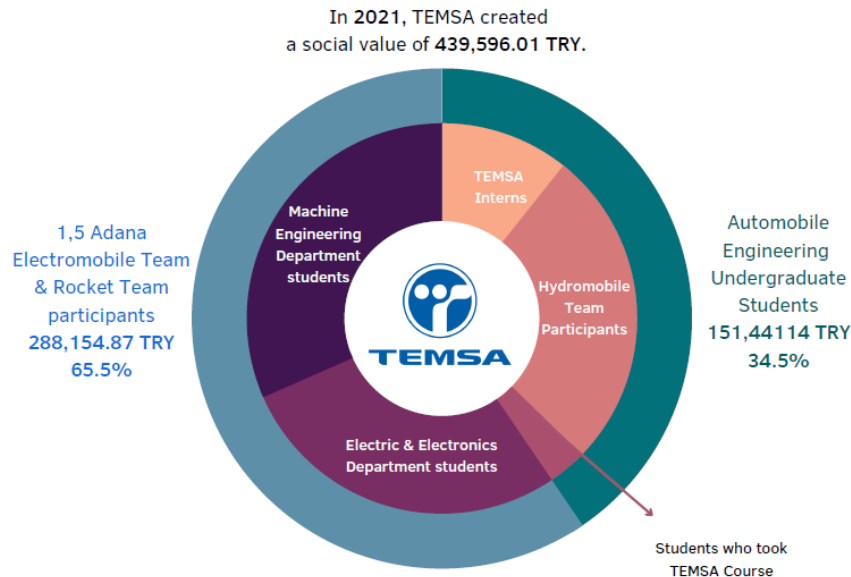
Temsa has been collaborating with Çukurova University (Ç.U) since 2008. This report covers the cooperation between Temsa and Ç.U. in terms of the Automotive Engineering Department and 1.5 Adana project teams. In line with the collaboration, Temsa provided internship opportunities for 1432 students between 2006 and 2021; 54 students started working at Temsa, 26 are still Temsa employees.

This impact report, prepared by Mikado Sustainable Development Consulting, covers the Social Return of Investment (SROI) assessment carried out to reveal the social impact created by the Temsa-Ç.U collaboration in 2021. In the study, the relevant and material changes for the stakeholders were determined using the SROI methodology, the representative financial values of the changes were investigated, the financial values of the changes were compared with the investments and the SROI ratio of the collaboration was calculated. In addition, the changes experienced by different stakeholders were examined.

The key findings of the study are as follows:

- Sum of the impact values created by the Temsa-Ç.U. collaboration in 2021 is calculated as **439,596.01 TRY**. Total financial and non-financial investments to the collaboration in 2021 was calculated as **30,998.50 TRY**. When comparing the total value to the total investments, the Temsa-Ç.U collaboration's social return in 2021 is found out as **14.18 TRY** (1: 14.18 TRY). 1:14.18 TRY indicates that the Temsa-Ç.U collaboration created an overall social value of ₺14.18 for every ₺1.00 invested in 2021.
- Highest total social value was created for the 1.5 Adana Rocket Team, the 1.5 Adana Electromobile Team and the Hydromobile team members (Please see Figure 1 below). The outcomes (change) experienced by this group with the highest values are respectively; *increased professional motivation, increased teamwork and communication skills and increased employability*. When asked about the outcomes in the impact questionnaire, the students responded that the most important outcomes were *developed professional skills and increased employability*.
- Second group with the highest total value is the Automobile Engineering students who had their internship at Temsa. The interns stated that they experienced *an increase in their employability and an increase in their sectorial motivation and knowledge* thanks to their internships.
- Finally, Automobile engineering students who took the Temsa course also *experienced an increase in their employability and in their sectorial motivation and knowledge*.

Figure 1 Temsa-Ç.U Collaboration's Impact on Students



Besides all these identified outcomes, there are other outcomes experienced by other stakeholders; such as graduate students, the faculty of the Automobile Engineering Department and the Temsa professionals that lectured at the Department. However as there are no specific activities targeted at these stakeholders, they were not included in the SROI analysis. On the other hand, in terms of the outcomes; graduate students expressed that opportunities created for academic studies through Temsa collaboration in the past increased their industry knowledge and awareness as well as their employability. The Automobile Engineering Department's academic staff on the other hand expressed that following the current industrial developments and being on site with Temsa can offer opportunities for their professional development. Finally, Temsa lecturers stated that through the Temsa course their professional motivation and intergenerational communication skills have increased. All in all, through the activities of this collaboration, it can also be concluded that Temsa created an awareness in the Adana region by creating a brand identity that prioritizes qualified education and thereby increased its' recognition and preferability both in the sector and in the labor market.

To increase the social impact created by the collaboration, some recommendations are also offered:

- In order to understand the beneficiary needs, close communication should be developed with the faculty of the Department both for ensuring the training of a qualified workforce and professional development of the students.
- Providing mentorship both for the graduate students and 1.5 Adana and Hydromobile teams could be another critical activity to increase impact.
- Increasing the number of intern students and the number of professional seminars could also be advised in terms of reaching more students.
- Finally, In order to ensure the sustainability of the collaboration, it is recommended to design and revise activities based on the Theory of Change by having close stakeholder dialogue. Also, conducting systematic impact assessment both for each activity and for the overall collaboration would definitely support Temsa's impact management.

1. Introduction

1.1 About Temsa

Temsa, established in 1968 in Adana, manufactures buses and midibuses. Temsa offers its customers mobility solutions. Apart from Turkey, Temsa operates in nearly 70 countries around the world, including the USA, UK, France, Germany, and Italy. Also, Temsa is one of the first bus manufacturers in the world to have two different electric buses, with its vision of smart mobility.

Temsa has 9 dealers in 9 locations in the bus segment and 22 dealers in the light truck segment. It operates from its Istanbul office and the Adana factory. In the production facility established on an area of 510,000 m² in Adana, Temsa has a production capacity of over 10 thousand vehicles per year, including 4,000 buses and midibuses, and 6,000 light trucks, with over 1,300 employees.

In 2020, Temsa became a partner of PPF Group N.V., the main partner of Škoda Transportation.

1.2 Temsa-Çukurova University Collaboration

A collaboration protocol was signed between Temsa and Çukurova University on April 4th, 2008. The scope of the protocol is the cooperation between TEMSA and the Çukurova University on the Automotive Engineering Undergraduate and Graduate Programs to be opened within the Faculty of Engineering and Architecture, and on subjects related to R&D.

The scope of the collaboration includes:

- Temsa's support to the Automotive Engineering Undergraduate and Graduate Programs to be opened,
- Scientific or technological research and development (R&D) project studies to be carried out between Çukurova University and Temsa,
- Infrastructure studies that will provide support to the Çukurova University for the scientific experiments at national or international level,
- Cooperation between Çukurova University and TEMSA for routine experiments,
- Consultancy studies to be carried out by Çukurova University faculty members at TEMSA,
- Çukurova University's graduate students to prepare their theses in cooperation with TEMSA,
- Undergraduate students of Çukurova University to do their internships, projects and dissertations in cooperation with Temsa, and
- Joint seminars, conferences, promotions, training events between Çukurova University and Temsa.

A laboratory was established and material support was provided to the Automotive Engineering Department, which was opened in 2010 with the support of Temsa, within the scope of the previously mentioned protocol. Theoretical training support was delivered by Temsa Professionals at academic level every semester. In 2010, TEMSA provided training materials; including working engines, air conditioners, and door systems of prototype vehicles, to the department.

TEMSA also provided internship opportunities for 1432 students between 2006 and 2021 under the name of "summer compulsory internship program" for university students. A 70-day long (long-term) Internship was also offered to the university students as an on-the-job training internship for the Fall

(October-December) and Spring (February-May) terms. Between 2011 and 2021, 417 students completed their long-term internships at TEMSA. 54 out of 417 students started working at TEMSA, currently, 26 of them are working.

Since 2008, Temsa has been supporting project groups consisting of students from Çukurova University, who represent the university both within the country and abroad. TEMSA has been providing vehicle mould and technical support to the Hydromobile Team, consisting of Çukurova University Automotive Engineering students since 2008.

1.5 Adana Rocket Team and 1.5 Adana Electromobile Teams comprise Çukurova University Electrical Electronics and Mechanical Engineering students. Vehicle mould and technical support are also provided for these teams. With the protocols made in 2020-21, students in the 1.5 Adana Project teams have the opportunity to make internships at Temsa. In 2020-21, 21 students completed their internships and 4 students were recruited at the company.

2. Social Return on Investment Methodology

SROI is a principle-based framework that identifies, measures, and calculates social outcomes. Furthermore, the SROI methodology identifies social value at an economic level and enables project managers to communicate the monetary value to all project stakeholders (Ralsler, 2007). Therefore, SROI can be used “as a tool for strategic planning and improving, for communicating impact and attracting investment, or for making investment decisions (Nicholls et al., 2012, p.10).

The SROI methodology identifies and monetizes social value based on the perceptions of stakeholders and experience of targeted beneficiaries. In line with this, the methodology uses the Theory of Change and certain indicators for identifying changes and then assigns monetary values to these indicators. The calculation of the value of outcomes is done by using monetary value as a proxy. Furthermore, SROI measures the social value compared to the investments in achieving those benefits. As the final step, comparing the monetary value of benefits to costs gives the SROI ratio. For instance, a ratio of 3:1 indicates that 3 € of social value is generated by an investment of 1 €.

SROI is useful for (Nicholls et al., 2012, p.10):

- Demonstrating if the targeted goal of the project/program is reached;
- Realizing the social value and how to maximize the social value an activity generates;
- Helping you target appropriate resources at managing unexpected outcomes, both positive and negative;
- Demonstrating the importance of working with other organizations and people that have a contribution to make in creating change;
- Identifying common ground between what an organization wants to achieve and what its stakeholders want to achieve; and
- Creating a formal dialogue with stakeholders that enables them to hold the service to account and involves them meaningfully in service design.

SROI takes its stems from cost-benefit analysis and social accounting. Based on these analyses, SROI has seven basic principles (Nicholls et al, 2012):

1. *Involve stakeholders*
2. *Understand what changes*
3. *Value the things that matter*
4. *Only include what is material*
5. *Do not over claim*
6. *Be transparent*
7. *Verify the result*

Besides these principles, SROI methodology has six stages (Nicholls et al, 2012).

1. **Establishing the Scope of the Analysis and Identifying Key Stakeholders:** This stage refers to determining the scope of your SROI analysis. Through this stage, the purpose of the study, the time period of the intervention in the analysis and both stakeholders and “key” stakeholders (called as beneficiaries) are identified.

2. **Mapping outcomes:** This stage covers developing the Theory of Change, which shows the casual relationship between inputs, activities, outcomes and ultimate goal of the project/program.
3. **Evidencing outcomes and giving them a value:** In this stage, outcome indicators are identified. After finding indicators for outcomes, evidence is collected through these indicators to collect evidence on the outcome. Afterwards, identified outcomes are given value based on their perceived relative importance.
4. **Establishing impact:** In this stage, it is aimed not to overclaim outcomes of the interference and assess whether these outcomes are the results of the project/program. Analyzing the outcome would have happened anyway without the project/program or any other interferences' impact of the outcomes together with the attributions of partner or other organizations in the environment are taken into consideration in this stage.
5. **Calculating the SROI:** In this stage, the financial value of the outcomes are calculated based on the data collected in the previous stages.
6. **Reporting:** In this final stage, SROI analysis and findings are reported and shared with stakeholders.

SROI can be conducted for forecasting or evaluating social outcomes. In this study, evaluative SROI is conducted as the impact of a past year, 2021, of the collaboration is analyzed.

3. SROI Analysis

3.1 The Scope of the Study and Determining the Stakeholders

The first stage of an SROI study is to determine the study's boundaries in terms of stakeholders and time period. In this SROI study, the scope is determined by analyzing the collaboration' documents and the quality of data that can be gathered related to the previous years of the collaboration. Thereby; it is understood that the 2021 data related to Temsa - C.U. Collaboration are current, and reliable. In line with this information, the year- 2021- is decided to be analyzed in this SROI study.

Stakeholders refer to the people or organizations that can be affected by the activities of the collaboration or can affect these activities. To identify the stakeholders of the projects, firstly a stakeholder analysis is conducted based on all collaboration documents. Through consultation with the Temsa team for the university collaboration, it is decided to cover key stakeholders who are directly affected by the project (for the key stakeholders please see Table 1). Thereby, stakeholders that are indirectly affected are not included in the SROI analysis. For instance, the Alumni of the Automobile Engineering Department is not included. The table below demonstrates the stakeholder groups and the rationale for their inclusion in the SROI analysis.

Table 1 Inclusion of stakeholder groups in the SROI analysis

	Stakeholder	Included/ Not Included	Rationale for inclusion in the SROI analysis
Temsa-Ç.U. Collaboration	Automobile Engineering Undergraduate Students	<i>Included</i>	One of the key stakeholders is Automobile Engineering undergraduate students as Temsa has protocols with this department in terms of internship, Temsa Course, and other joint academic-industry projects.
	1.5 Adana Electromobile Team Members 1.5 Adana Rocket Team Members	<i>Included</i>	Students participating in these projects benefit from the technical and material support provided by Temsa.
	Automobile Engineering Graduate Students	<i>Not Included</i>	. In 2021, graduate students had no academic and material support from Temsa. That's why this group isn't included in SROI analysis.
	Automobile Engineering Faculty	<i>Not Included</i>	Using the state-of-the art technological laboratories, conducting joint projects and having support for academic meetings may have an impact on academics' professional development. However, as there were no joint projects and no other support from Temsa to the academic staff in 2021, this group wasn't included in the analysis.
	TEMSA Lecturers	<i>Not Included</i>	Professionals from Temsa lecture two hours each week to the 4th grades at the Automobile Department. However, as they aren't the main beneficiaries and each lecturer spends only two hours for lecturing, the social outcomes of Temsa lecturers aren't included in the analysis.
	Automobile Engineering Department Alumni	<i>Not included</i>	The Alumni aren't included in the analyses because the collaboration don't cover activities designed for this group.

3.2. The Inputs & Outputs of Temsa-Ç.U. Collaboration

Inputs are the resources invested by stakeholders in a project, necessary for the project activities. While financial inputs are easier to identify, it is important to take non-cash inputs (e.g., time) and their financial values into consideration while calculating the SROI ratio. On the other hand, project outputs are the quantitative summary of the project's activities.

The inputs and the outputs of Temsa and Ç.U.'s collaboration are as follows:

Table 2 Summary Table of the Inputs and Outputs of Temsa-Ç.U. Collaboration (2021)

	Investment Type	Amount (TRY)	Source	Rationale	Output
TEMSA- Ç.U. Collaboration	Material Cost	10,000.00	Temsa	MDF molds for 1.5 Adana and Hydromobile Team	Projects that lasts for one academic year
	Labour Cost	6,384	Temsa	Labouring for 1.5 Adana and Hydromobile Team	200 hours of labor work for the projects
	Time (Work time cost of Temsa lecturers for Temsa course)	1,970.36	Temsa	(Temsa lecturers' average hourly employee cost)* (Total duration of lecturing)* (70.37 TRY)*(28 hr)=1,970.36 TRY	12 Temsa employees lectures for 28 hours in total
	Transportation Cost	290.5	Temsa	(Kilometers driven* Amount of fuel used)* (Number of lectures)=(23 km*1.4 (1 liter of gasoline is 16.6 km, 23/16.6=1.4 km))*2*14 =290.5 TRY	14 days of transportation
	Interns' Salaries	11,303.64	Temsa	(1/3 months worth of work time cost of minimum wage)*(Number of interns) = (1/3)*(2,825.90 TRY)*(12) = 11,303.64 TRY	70 workday internship for 12 students
	Salary of Temsa Lecturers	1,050	Çukurova University	2 Hours course fee*number of courses= 75*14=1,050 TRY	14 courses
	Total	30,998.50			

The inputs in Table 2 are based either on the information provided by Temsa or on the calculations made through various official sources. For instance, the material cost of MDF molds for 1.5 Adana and Hydromobile Team was provided by Temsa as 10,000 TRY. Also, Temsa stated that they spent 200 hours of labour for the technical support to 1.5 Adana and Hydromobile Teams. The financial equivalent of the technical support is calculated based on the average salary of a manufacturing worker (6,560 TRY)¹ in 2022. Then, the average net salary is adapted to 2021 according to the Consumer Price Index. The wage for one day is calculated by dividing the salary by 20 working days and 1 hour's wage by dividing the 1 day's pay by 7.5 hour work day. The technical support is provided for 200 hours. The calculation is as follows:

Average salary of a manufacturing worker for 1 month (2022) = 6,560 ₺

¹ <https://www.kariyer.net/pozisyonlar/uretim+iscisi/maas>

Average net salary of a manufacturing worker for 1 month (2021) =

$$\text{(Value in 2022)} * \left(\frac{100}{100 + (\text{Aralık 2021 yıllık \% TÜFE})} \right) = (6,560 \text{ ₺}) * \left(\frac{100}{136,1} \right) = 4,788.8 \text{ ₺ (1 month, 20 working days)}$$

Average net salary for 1 day = $4,788.8/20 = 239.44 \text{ ₺}$ (1 day, 7.5 hours work day)

Average net salary for 1 hour = $239.44/7.5 = 31.92 \text{ ₺}$

200 hours of technical support = (Average net salary for 1 hour)*(Labour hours of technical support)
= $31.92 * 200 = 6,384 \text{ ₺}$

The financial equivalent of the working time spent by Temsa lecturers for Temsa Course is calculated based on the average net salary of the Senior Engineer (12,780 TRY)² and Research and Development Manager (16,480 TRY)³ in October 2022. The average of these two positions (14,366 TRY) is taken in order to take into account departmental differences. 12 Temsa employees worked for a total of 28 hours, and this 28-hour wage was calculated according to the Consumer Price Index, adapted to 2021, as follows:

Average net salary for 1 month (2022) =

$$\left(\frac{\text{Average net salary of expert machine engineer} + \text{Average net salary of R\&D manager}}{2} \right) = \left(\frac{12780 + 16480}{2} \right) = 14,366 \text{ ₺}$$

Average net salary for 1 month (2021) =

$$\text{(Value in 2022)} * \left(\frac{100}{100 + (\text{Aralık 2021 yıllık \% TÜFE})} \right) = (14,366 \text{ ₺}) * \left(\frac{100}{136,1} \right) =$$

10.555 ₺ (Value in 2021, 20 working days)

Average net salary for 1 working day = $10,555/20 = 527.75 \text{ ₺}$ (1 working day, 7.5 hours⁴)

1 hour average net salary = $527.75/7.5 = 70.37 \text{ ₺}$

28 hours tuition for 1 Temsa lecturer = $70.37 * 28 = 1,970.36 \text{ ₺}$

The transportation cost of Temsa employees for Temsa courses is calculated based on the kilometers driven between Temsa office and Çukurova University Campus (23.3 km)⁵, the amount of fuel used (1.4 lt) while driving, the price of gasoline per liter (7.41 ₺) and the number of lectures (14) round trip. According to Shell's archive information⁶ on January 1, 2021, the price of fuel was 7.41 ₺. The amount of fuel used was calculated using the formula⁷ of the distance the vehicle can travel on 1 liter of gasoline. The calculation is as follows:

$$\text{The distance the vehicle can travel on 1 liter of gasoline} = \frac{\text{Kilometers driven}}{\text{Amount of fuel used}} = \frac{100}{6} = 16.6 \text{ km}$$

$$\text{The amount of fuel used} = \frac{\text{Kilometers driven}}{\text{Amount of fuel used}} = \frac{23.3}{16.6} = 1.4 \text{ lt of gasoline}$$

² <https://www.kariyer.net/pozisyonlar/makine+muhendisi+uzmani/maas>

³ <https://www.kariyer.net/pozisyonlar/arastirma+gelistirme+arge+yoneticisi>

⁴ <https://www.calismamevzuati.com/2020/02/iscilerin-gunluk-ve-haftalik-calisma-saati/>

⁵ <https://www.google.com/maps/>

⁶ <https://www.shell.com.tr/suruculer/shell-yakitlari/akaryakit-pompa-satis-fiyatları.html>

⁷ <https://www.otomerkezi.net/yakit-tuketimi-hesaplama>

The transportation cost per lecture round trip = liter of gasoline used*price of gasoline*2 = 1.4*7.41 = 20.75 ₺

The transportation cost for 14 courses = 20.75*14 = 290.5 ₺

Interns' salaries were calculated based on the wage paid to interns and the number of interns. Based on the information shared by Temsa, interns' salaries are 1/3 of the net minimum wage (2,825.90 TRY)⁸. The calculation is as follows:

Average net salary for 1 month (2021) = 2,825.90 ₺

Intern's net salary for 1 month = 2,825.90/3 = 941.97 ₺

Interns' salaries = 941.97*12 = 11,303.64 ₺

Salary of TEMSA lecturers were calculated based on the information given by Çukurova University as 75 TRY for a 2 hours course and the number of courses.

Temsa lecturers' salaries= 75*14 = 1,050 ₺

3.3. Mapping Changes (Outcomes) of Temsa-Ç.U. Collaboration

The changes or outcomes refer to the changes experienced by the stakeholders as a result of the collaboration activities. In this study, the key stakeholder changes are judgments based on the data collected through documents, meetings with the Temsa team, and stakeholder involvement in focus groups and one-to-one interviews. Throughout this data collection process, the fourth stage of SROI methodology-" materiality" is taken as the basic principle.

Materiality

Fourth principle of SROI underlines the inclusion of relevant and significant stakeholders and outcomes in the analyses. For materiality of outcomes, the following two criteria can be taken into consideration (Supplementary Guidance on Materiality, The SROI Network 2011):

- Relevance can be assessed through stakeholder involvement by asking them which outcome is important to them or finding out which outcome is more valuable to the organization, or analyzing past research about the outcomes.
- Significance can be attributed by looking at the number of people who experience the outcome, or the amount of the outcome, or the duration of the outcome, or the financial value of the outcome.

For assessing the materiality of the outcomes, questions regarding the relevance and significance of the outcomes were addressed to the stakeholders in the focus groups. After identifying relevant and significant outcomes based on focus group discussions, the stakeholders included in SROI were asked to rate these outcomes in terms of the amount of outcome (significance) in the impact questionnaires. Respondents value the amount of outcome from '1' to '10', '1' standing for the least significant one

⁸ <https://www.aile.gov.tr/asgari-ucret/asgari-ucret-2021/>

and '10' standing for the most significant. The outcomes that have a weighting of 5 out of 10 are determined to be assessed as immaterial. However, none of the outcomes are found out to be immaterial, as all have a weighting above 5.

3.4 Mapping Outcomes of Temsa-Ç.U. Collaboration

Focus Groups, One-to-one Interviews, and Written-in-depth Interviews

To analyze the goals and the planned outcomes of the Temsa team, a focus group meeting was held on April 13, 2022. After that meeting, the Mikado team met with the Department Head of Automobile Engineering on May 25, 2022. Following that, a focus group meeting with Temsa interns was conducted on May 26, 2022. Later, another focus group discussion was held with Hydromobile and 1.5 Adana Team members. Written-in-depth interviews were sent to the professionals during June 2022 to get the opinions of Temsa professionals that support these teams. Also, written-in-depth interviews were sent to Temsa lecturers to learn the outcomes that can be created by the Temsa Course. Finally, a focus group meeting was held with Temsa employees taking M.A. or Ph.D. education at the Automobile Engineering Department on July 19, 2022 to have a deeper understanding of the outcomes related with the graduate studies (for details please see Table 3, for focus group questions see Annex 1-4).

Table 3 Focus Group and One-to-one Interviews

Date	Participant Profile	Number of Participants	Meeting Type and Platform
13 April 2022	Temsa Team	4	Focus Group Zoom meeting
25 May 2022	C.U. Automobile Engineering Department Head	1	One-to-One Interview Zoom meeting
26 May 2022	Temsa Interns	4	Focus Group Zoom meetings
6 June 202	Hydromobile and 1.5 Adana Team Members	3	Focus Group Zoom meetings
19 July 2022	Temsa Employees that are enrolled in Automobile Engineering M.A. or Ph.D. Programs	3	Focus Group Zoom meetings

After the focus group meetings and one-to-one interviews, the impact evaluation questionnaires were prepared based on the data collected. Questionnaires cover statements related with the following identified outcomes of the projects asking participants to give value for each outcome from 1 to 10 in terms of their significance, to be used in calculating the social value created by Temsa:

- the extent to which the changes are seen in a stakeholder group (the proportion of survey participants who have experienced the change),
- the relative importance stakeholders attach to the relevant change (weighted importance attributed to the change),
- how long the impact of the change lasts (average duration of impact) and the extent to which change can be experienced (specific weight)

(For survey questions please see Annex 5-6)

Identified Outcomes of the Automobile Engineering Undergraduate Students

“When I started working at Temsa, I thought that automotive engineering consisted only of design and production. I learned about the field work side of things during my internship.”

“As automotive engineers, we did not think that we would go to after-sales services, we thought we would only be involved in car development. We understood that automotive engineering encompasses all processes related to a car.”

Temsa Interns

An impact questionnaire was applied to the Automobile Engineering undergraduate students to have more information about the outcomes of Temsa-Ç.U. collaboration. A total of 60 students out of 300 responded to the questionnaire; 4 of them did their internship at Temsa, 16 were graduates, and 40 students took Temsa courses. 19 out of 60 intend to pursue a graduate education related to automobile engineering.

Out of 60 students that responded to the impact questionnaire, 54 were male and 6 were female. Most of the respondent students (n=53, 88%) stated that they are aware of the Temsa-Ç.U. collaboration and 30 (50%) replied that this collaboration has played a role in their choice of studying at the department. When asked to rate this collaboration's effect on their preference for the department, the students rated 7 out of 10.

One student stated that he's working at Temsa right now and 23 out of 40 (who aren't interns or graduates) claimed that they want to have an internship at Temsa. Similarly, 33 out of 40 (one student who is working at Temsa excluded) stated that they want to work at Temsa. On the other hand 16 students are identified as having no intention of having an internship or working at Temsa in the future. When asked about the reasons, four students expressed that other companies can provide better opportunities (ex. in terms of R&D). Two of the students don't plan to work as engineers and the other two have answered that nepotism plays a role in the hiring process.

Based on both the focus group and on the impact questionnaire, it is understood that throughout the internship, students benefited from gaining knowledge about the industry, corporate life and what is expected in terms of job requirements. It can be concluded from the data collected at the focus group that students who had internships at Temsa felt especially prepared for career paths in the automotive industry.

A notable shared takeaway for students was learning about the fieldwork side of automotive engineering and building a skill set suitable for work life thanks to an increased sectorial awareness which also helped solidify career plans for the future. For instance, the interns didn't expect that they would go to after-sales services for products and realized that automotive engineering actually encompasses all processes related to a car, not just design and development. One student shared that

they felt like they ‘learned how to teach’ when it comes to examining the systems of a car in detail and being able to explain it to non-experts.

“One of the biggest contributions of the internship was understanding how the corporate world works. There are a lot of sub-industry firms but they don’t have corporate structures.”

Temsa Intern

As a result of the collaboration activities, according to the order of importance attributed by the Temsa interns, it was identified that the interns experienced **changes in employability and sectorial motivation** (see Table 4 below). When asked the most important outcome of the collaboration, the students evaluated the development of their business-related skills and thereby the **increase in their employability** as the most significant outcome.

Table 4 Outcomes Experienced by the Automobile Engineering Intern Students

Outcome Experienced by the Automobile Engineering Intern Students⁹	Number of Undergraduate Students that Experience the Outcome	Outcome Weightings by Students (out of 10)¹⁰	Outcome Rank	Average Duration of the Outcome (Year)¹¹	Deadweight (%)
Increase in employability	4/4	9	1	1	27
Increase in sectorial knowledge and motivation	3/4	8.7	2	1	38

When examined, the focus group data of the **undergraduate students** in the Automobile Engineering Department who participated in the 14-week Temsa Course, it is similarly understood that these students felt **their sectorial motivation increased**. The course taught students about corporate life practices and the sector in general.

⁹ In order to calculate the real impact arising from the changes created in the Temsa-Çukurova University collaborations, it is necessary to examine the inclusiveness of the changes and to gather them under the outcomes. Otherwise, the social impact of the project will be overestimated by including the interim changes leading to the same outcome in the calculation, and the benefit of the work for the decision-making processes in the future will be weakened. For this purpose, the changes identified in the focus group interviews were gathered under the outcomes by convergence (the changes showing increasingly similar characteristics) and were confirmed by the beneficiaries with social impact surveys. Through the open-ended questions in the questionnaires, the possibility of other changes that could not be detected in the focus groups but experienced by the beneficiaries was tested, and no other changes were identified other than the determined changes.

¹⁰ In order to use the anchoring method when calculating the SROI rates, the beneficiaries were asked to rate the importance they attributed to each change (they experienced) with '1' being the most important change, '10' being the most important change. This scoring system allows the financial values of the changes to be compared by showing the weighted importance that the stakeholder group attributes to each change. If the importance attributed to any change is below '5' out of '10', it was decided not to take the relevant change into consideration. It was seen that the attributed importance for all the changes determined to be caused by the collaboration was above the determined threshold and all changes were included in the evaluation.

¹¹ The start time and effect duration of every article of change identified as important for stakeholders and included in the SROI calculation have been evaluated by the stakeholders among the options '0-6 months (0,25 years)', '7-12 months (0,75 years)', '1-3 years (2,0 years)', 4 years and more (4,0 years)' The average duration of effect was calculated by averaging the responses of the participants. Non-integer averages have been rounded to decimal values due to the necessity of using integers in the calculation phase.

Table 5 Outcomes Experienced by the Automobile Engineering Undergraduate Students that Took the Temsa Course

Outcome Experienced by the Automobile Engineering Undergraduate Students	Number of Undergraduate Students that Experience the Outcome	Outcome Weightings by Students (out of 10)	Outcome Rank	Average Duration of the Outcome (Year)	Deadweight (%)
Increase in employability	30/40	8,1	1	1	29
Increase in sectorial knowledge and motivation	22/40	8,7	2	1	30

Identified Outcomes of the Members of Hydromobile and 1.5 Adana Teams

Similar to the undergraduates, an impact questionnaire was applied to the members of Hydromobile and 1.5 Adana Teams. 12 students out of 12 responded from the Hydromobile team and 24 students responded out of 35 from the 1.5 Adana teams. Out of 37, 32 are males and 25 (67%) of them stated that they are aware of Temsa-Ç.U. collaboration.

Among the members of the 1.5 Adana teams; two students are the leaders of 1.5 Adana Rocket Team, the other two are the 1.5 Adana Electromobile team leaders and 20 are the members of the 1.5 Adana team.

Out of 47, 5 students stated that they are working at Temsa right now and another 14 are going to apply for job positions at Temsa in the future. Similarly, 7 had internships at Temsa and 27 are thinking about having internships at Temsa.

Both in the focus groups and the impact questionnaire, team members expressed that they had a chance to practice technical knowledge and skills, developed problem-solving skills, gained experience in design, business execution and planning in a professional project. Working on national and international projects increased the participants' experience of project design and management. Students also expressed that as team members they had a chance to put into practice their theoretical knowledge. They had the opportunity to develop their abilities in digital drawing programs that they could not learn at school but would use as engineers in their professional life. Skills around teamwork, planning (especially when leading the unit and team), and problem solving were the ones that got developed the most. Team members learned to work under stress and to manage their time more efficiently, while holding responsibilities towards other teams as well as their own. Team membership contributed to the professional business life of students; they worked during the school year as well as the summertime and worked on weekends of their own accord. Therefore, it is understood that the participants' **professional motivation and skills along with their employability is increased.**

In the questionnaire completed by team members, it was revealed that by working with people coming from diverse backgrounds, generations as well as industry professionals at Temsa, team members also developed their **communication and team work skills**.

The impact questionnaire indicated that for the team members, the most important outcome of the Temsa-Ç.U collaboration is to develop professional skills and to increase the employability through their experience of being a team member.

Table 6 Outcomes Experienced by the Hydromobile Team Participants

Outcome Experienced by the Hydromobile Team Members	Number of Hydromobile Team Members that Experience the Outcome	Outcome Weightings by the Hydromobile Team Members (out of 10)	Outcome Rank	Average Duration of the Outcome (Year)	Deadweight (%)
Increase in employability	11/12	7,1	1	1	27
Increase in professional motivation	11/12	9,0	3	3	29
Increase in communication skills	10/12	8,6	4	3	30
Increase in teamwork skills	10/12	9,2	2	3	34

The team members also had some recommendations to increase the impact of Temsa's support. For instance, organizing a technical field trip to Temsa for team members and exchanging ideas with engineers who have experience in various fields, would make a great contribution to them as candidate engineers. Additionally, it was expressed that seminars on engineering solutions and thinking would be beneficial to succeed as a team.

Also, to students, one of the important aspects of TEMSA's support for the teams is its contribution to the promotion of industry in Adana. One student pointed out that generally businesses and initiatives in Adana have a hard time finding sponsorship, including the university. TEMSA's support of the Hydromobile and 1.5 Adana Teams aided the success of the teams. Successful representation of Adana through the successful outcomes of competitions and trophies won at Teknofest, gave students a sense of pride in representing both the school and Adana, showing that there are good engineers from Çukurova University to companies. The public's approach also motivated the teams, and made them ambitious for representing their city in a good light and their success increased. The team's success was also making the Adana public proud, and the members stated they could feel everyone's support both morally and financially. The students were also in the idea that the teams' success also strengthened Temsa's brand in Adana.

Table 7 Outcomes Experienced by the 1.5 Adana Electromobile Team Participants and 1.5 Adana Rocket Team Participants

Outcome Experienced by the Team Members	Number of Team Members that Experience the Outcome	Outcome Weightings by the Team Members (out of 10)	Outcome Rank	Average Duration of the Outcome (Year)	Deadweight (%)
Increase in employability	22/24	9,4	1	3	38
Increase in professional motivation	22/24	9	3	3	29
Increase in communication skills	19/24	8,6	4	3	30
Increase in teamwork skills	20/24	9,2	2	3	34

Outcomes identified for other stakeholders

Besides the outcomes experienced by undergraduate students and team members, it is also understood that the graduate students and the faculty of the Automobile Engineering Department, and Tamsa lecturers who deliver two hours course each week have also been affected positively by the collaboration.

However, the social impact experienced by these groups aren't included in the final SROI calculations because there are no activities designed specifically for these groups and thereby, they aren't the main beneficiaries.

In the following paragraphs, the positive outcomes experienced by graduate students and the faculty of the Automobile Engineering Department, and Tamsa lecturers are discussed based on the focus group discussions and one-on-one interviews.

a. Graduate Students of Automobile Engineering Department

The focus group discussion held with the undergraduate students of the Automobile Engineering Department outlined the fact that the outcomes for the graduate students were similar to that of the undergraduate students. To the graduate students, opportunities created for academic studies for the industry with Tamsa collaboration also **increased industry knowledge and awareness as well as employability.**

Additionally, developing more joint projects between Tamsa and Çukurova University as well as encouraging Tamsa employees for postgraduate education positions at the Automotive Engineering Department would improve the social impact of the collaboration. Overall students who are working felt that their **professional development** was increased thanks to the support Tamsa provided.

In the focus group meeting, the graduate students that are working at Temsa stated that Temsa supported their employees to have graduate education by taking time off for graduate classes. It is also expressed that Temsa encourages its employees to have a thesis subject related to Temsa. A participant stated that collaboration with Temsa is one of the reasons to choose the Çukurova University Automotive Engineering Department for a master's degree. All these reflect that incentives of Temsa for its employees to join graduate programs have a role in supporting the impact of Temsa Çukurova University collaboration. Therefore, like undergraduate students, the graduate students also felt that their **academic success was encouraged and their sectorial motivation increased** through the laboratories and ateliers Temsa established.

Another participant of the focus group meeting expressed that Temsa prepares intern students from Çukurova University for business life and later recruits them, hence contributes to the orientation of students to the private sector. According to this participant, interns work as if they are employees, and they are called "candidate engineers", not trainees. To the participant, this creates a feeling that the intern is a part of Temsa family. It makes a double contribution to both the student and TEMSA and thereby poses a positive impact on the Temsa-Çukurova University collaboration. Also to the students, Temsa's closeness in terms of distance contributes as well to the collaboration's impact.

b. Ç.U. Automotive Engineering Faculty

Temsa has a positive impact on the Çukurova University staff as well. The development of laboratories and strengthening of access to up-to-date materials, keeping theoretical knowledge up-to-date with established collaboration and interactions, and increasing the number of qualified graduate students in the department increased the professional development and motivation of the teaching faculty.

Regarding the **general observations the** faculty had about the collaboration between the Automotive Engineering Department and Temsa, one faculty member expressed that they think the program is a good example of university and industry collaboration and that they hope that the collaboration will develop further in the future. Notably, to another faculty, the collaboration between Temsa and the university were more active in 2017 and now requires improvement. Also, the faculty had various recommendations for developing the collaboration in the future. For instance, one faculty member advised that Temsa could give a short presentation introducing the devices they use in their labs to students. Another recommendation was to create opportunities for undergraduate, graduate students to work together in their thesis research. Also, studies targeting collective TUBITAK (The Scientific and Technological Research Institution of Turkey) projects together would increase the impact created. Overall, the faculty regarded the partnership with Temsa as beneficial in developing academy-industry collaboration and hopes to see more activities within the framework of the collaboration.

c. Temsa Lecturers

The general observations of Temsa lecturers who deliver a 14-week Temsa course was that the course served as an orientation training given to newcomers at Temsa, for students who haven't had the opportunity to have an internship. In this way, lecturers thought that the course gives an idea about

the main departments and functions and thereby prepare students to decide about their future careers.

The lecturers stated that interacting with the students and the academic staff creates a mutual learning atmosphere and the course preparation had an effect on **increasing their professional motivation** by keeping their professional knowledge up-to-date. Their **communication skills** were also positively affected by strengthening intergenerational, intra-company, and academic communication.

Recommendations by Temsa lecturers regarding the collaboration's impact included improving communications between the university and the company and working on building more sustainable collaboration. One lecturer expressed that "they do their best as Temsa".

One of the main barriers to improve the collaboration, to the lecturers, is the department's language of instruction, which has recently become Turkish. To the lecturers, this turns out to be a hindrance for taking new interns from the department. Also, some lecturers stated that there's a lack of interest from some faculty members in the collaboration and this slows down the interaction between them.

To increase interest from the university side, it was suggested that some of the Temsa trainings could be conducted on-site at Temsa so that students can see the production area and the working environment. Similarly, lecturers also think that more opportunities can be provided to students. This was supported by other lecturers who thought that sectorial education should be more prevalent for development of the students.

Lecturers were also motivated by the fact that they can train and work with promising young talents with different perspectives about the sector who might, in the future, become colleagues working at Temsa.

4. SROI Calculations

4.1 Calculating the number of stakeholders experiencing outcomes

In this SROI study, the experience of the relevant stakeholder groups for each change was determined through social impact surveys. For each stakeholder group, the number of survey participants who stated that they had experienced a change was proportioned to the total number of people surveyed, and this ratio was reflected in the total population of the stakeholder group. (Experienced changes are shared in the change tables in section 3).

The ratio of the stakeholders who experienced the change was calculated with the following formula:

Stakeholder number based on the change :

$$= \left(\frac{\text{The number of survey participants who stated that they had experienced a change}}{\text{Total number of participants}} \right)_{\text{Survey}} * (\text{Total number of stakeholders})$$

4.2 Calculating the Financial Value of Outcomes through Anchoring and Deductions

Anchoring is an SROI calculation method which allows finding the comparative financial value of different outcomes experienced by a stakeholder group. An anchor stands for a financial proxy which corresponds to the financial value of a final outcome and it responds to the question of 'How would a beneficiary reach this particular outcome without having participated to this project?'. In this method, the estimated financial value of a change, which was identified as a result of the project, and measured, can be determined by cost-based (eg. calculating the opportunity cost) or value-based (eg. identifying the stated preferences of the beneficiaries, etc.) approaches. This representative value (proxy) determined for the relevant change constitutes a reference point and the estimated financial values of all changes experienced by that stakeholder group are calculated by considering the weighted importance rates attributed to the changes by the beneficiaries.

Anchor of Outcomes in TEMSA-Ç.U. Collaboration

Anchor for Temsa Interns and Project Members

'The increase in the employability' is selected as the anchoring outcome for the outcome experienced by the Çukurova University Automotive Engineering undergraduate students who had internships at Temsa. Temsa selects the interns among a pool of students and makes interviews before the selection. Thereby, the students who had internships at Temsa have a higher chance of getting employed by Temsa and other companies. This statement has been stated both by the interns and the representatives of Temsa at the focus groups.

The chain of intermediate outcomes for this final outcome is as follows:

“Intern students gain information about corporate life, practices, and the sector with the internship. They get practical knowledge through the laboratories and ateliers provided by Temsa and the Temsa course. Therefore, their industrial knowledge is increased, and hence, their **chances of employability is increased.**”

For the outcome valuation of the Çukurova University Automotive Engineering undergraduate students who were interns at TEMSA, a *revealed preference approach* is used. In the revealed preference approach, market values are used to assign value to non-market outcomes. Therefore, the anchor value was determined based on the scenario of students working part-time so that the stakeholder group would experience the same change.

Thereby, the anchor for the selected outcome is as follows:

Students can work part-time, and the wage can't be lower than the intern wage. Based on Law No 3308 (Article 25); the intern wage can't be lower than 30% of the minimum wage. In 2021, the minimum wage was 2,825.90 TRY and 30% of the minimum wage was 847.77 TRY. Thereby, the wage of working part-time for an undergraduate can't be lower than 847.77 TRY per month. To find the anchor value, this amount is multiplied by the duration of the internship:

$$\text{Anchor (Average cost of part-time wage)} = \text{daily wage} * \text{duration of the internship} = \left(\frac{30\% \text{ of minimum wage}}{30}\right) * 70 = \left(\frac{847.77/30}{30}\right) * 70 = 28.26 * 70 = 1,978.2 \text{ ₺}$$

Temsa gives privilege to the interns and students who participated in the teams in terms of offering employment. That's why 'Increase in Employability' is also selected as the anchoring outcome experienced by the Çukurova University Automotive Engineering undergraduate students who took part in the Hydromobile Team, 1.5 Adana Electromobile Team, and 1.5 Adana Rocket Team and that also took 14 weeks of Temsa course. The chain of events for this outcome is as follows:

“Putting theoretical knowledge into practice, working with Temsa professionals, and getting working experience in national and international projects increased the participants' experience of project design and management. Therefore, the participants' **employability is increased**”

The revealed preference approach is also used for these groups for the same anchor. Therefore, the anchor value was determined based on the same scenario of students working part-time so that the stakeholder group would experience the same change (Please check the formula above).

Anchor for Undergraduate Students who Took Temsa Course

'Increase in sectorial motivation' is selected as the anchoring outcome experienced by the Çukurova University Automotive Engineering undergraduate students who took 14 weeks of Temsa course.

The chain of events for this outcome is as follows:

“Undergraduate students get informed about corporate life, practices, and the sector with the course conducted by Temsa. They get practical knowledge through the laboratories and ateliers established by Temsa. All these supports provided by TEMSA increase their academic success and sectorial knowledge and hence, their **sectorial motivation is increased**”

For the outcome valuation of the Çukurova University Automotive Engineering undergraduate students who took the Temsa courses, a revealed preference approach is used as well. Therefore, for Temsa courses, the average fees of courses that can offer the same outcomes are investigated. Courses in related fields which can provide similar content for Automotive Engineering undergraduate students are selected. To be more precise, the average cost of three courses; Course A (460 TRY), Course B (350 TRY), and Course C (85 TRY) are calculated, and to find the anchor value, this amount is adjusted to 2021 based on the Consumer Price Index for Turkey.

Anchor (Average fee of 3 automobile engineering courses) = (Course A 460 ₺ + Course B 350 ₺ + Course C 85 ₺)/3 = 298.33

Year adjustment (2022 to 2021): Anchor corrected for annual Consumer Price Index for Turkey = (298.33 ₺)*(100/136.1 (2001 December CPI) = 219.19 ₺

4.3 Deductions

In accordance with the 5th principle of the SROI methodology, the calculated value should not be higher than the actual value created while analyzing the social value created as a result of the collaboration activities,. The SROI method is prone to 'overclaiming' value when there are multiple stakeholders involved in a project or when stakeholders' potential independent experiences are not taken into consideration. To calculate the 'real' value created by the stakeholder of interest - by TEMSA in this case -, it is critical to take certain deductions into consideration:

Deadweight: A measure of the amount of outcome that would have happened even if the activity had not taken place. The specific weight of each change included in the calculation in the current SROI analysis was determined by directly asking stakeholder groups through social impact surveys. The beneficiaries stated in percentages how much they would experience the relevant change if they were not involved in the project, and the specific weight of the relevant change was calculated by taking the average of these percentages.

Attribution: An assessment of how much of the outcome was caused by the contribution of other organizations or people. Attribution is asked to both Temsa team and the faculty of the Automobile Engineering Faculty. Attribution deduction was determined to be 0% as there are no external contribution other than Temsa's support.

Displacement: An assessment of how much of the outcome has displaced other outcomes. For example, if the activities prevent people from experiencing the same changes somewhere else, one should take this into account.

In the Temsa-Çukurova University collaboration, Temsa contributed to the Çukurova University Automotive Engineering Department with Temsa courses, internship opportunities, and technical and material support to the 1.5 Adana teams. In terms of displacement, it is assumed that there is no other activity that will create higher value in the education process of undergraduate students. Undergraduate students benefited from Temsa courses during course hours. Therefore, it was seen that the changes evaluated within the scope of this SROI study did not prevent the experience of another possible change, and the displacement rate was accepted as 0% for all changes.

Drop-off: The deterioration of an outcome over time. Drop-off depends on stakeholder experiences, the nature of the outcome/project, and the duration of the program. Within the scope of this SROI study, the reduction rates of the effects of the changes were calculated according to the change periods determined through social impact surveys as follows:

Drop-off = $\frac{100\%}{\text{Average Impact Period (Year)}}$; for example, 50% of the drop-off rate represents a scenario where the impact of an experienced change will be halved within a year.

Discount Rate: It is the interest rate used to discount future costs and gains to their present values. In this SROI study, the discount rate of the value created by the project activities realized in 2021 was determined as 14.75%, based on the rediscount discount rate¹² determined by the Central Bank of the Republic of Turkey.

Limitations

The main limitation of the study is the difficulty of communicating with the stakeholders and their low response to the impact questionnaires. It was especially difficult to reach beneficiaries for questionnaires and this limited the degree of stakeholder involvement, which is the most critical feature of SROI. For instance, the number of respondents for automobile engineering students were around 40 which made it difficult to generalize the findings of the study. Therefore, the targeted measurement precision couldn't be reached for determining the proportion of participants who experienced the changes and the values related with the weighted importance of the outcomes.

4.4 Calculations of SROI

At the final stage of the study, the SROI value generated by the Temsa-Ç.U collaboration is calculated by comparing the financial value of the social value and comparing it with the investments done by Temsa for the Ç.U. collaboration in 2021. In other words; SROI value of the evaluated year is calculated as the ratio of impact created in the evaluated year over the invested financial value. Also, this measurement provides a guide to optimize the future impact of the Ç.U. collaboration.

¹² <https://www.tcmb.gov.tr/wps/wcm/connect/TR/TCMB+TR/Main+Menu/Temel+Faaliyetler/Para+Politikasi/Reeskont+ve+Avans+Faiz+Oranlari>

The table below (Table 8) includes the changes experienced by each stakeholder group, the TRY based impact values of each change, the TRY based total impact values of the changes, and the social return of the investment made for Ç.U. collaboration 2021.

Table 8 Social Impact Values, Total Social Impact Values for the Changes, Total Investment & SROI Ratio for the Temsa-Ç.U Collaboration in 2021

Stakeholder	Outcome (Change) experienced by the stakeholder	Total Value (TRY)
Automobile engineering students that are TEMSA interns (n=12)	Increase in employability	15,094.98
	Increase in sectorial knowledge and motivation	10,670.41
Automobile engineering students that take part in the Hydromobile team (n=12)	Increase in communication skills	32,275.10
	Increase in teamwork skills	32,553.89
	Increase in professional motivation	37,684.67
	Increase in employability	13,837.06
Automobile engineering students that take Temsa course (n=42)	Increase in employability	4,038.81
	Increase in sectorial knowledge and motivation	5,286.22
1.5 Adana Electromobile Team participants 1.5 Adana Rocket Team participants (n=35)	Increase in communication skills	68,258.41
	Increase in teamwork skills	71,306.88
	Increase in professional motivation	82,804.22
	Increase in employability	65,785.36
Temsa-Ç.U Collaboration SROI Ratio (2021)	Total Impact Value	439,596.01
14.18	Total Investment	30,998.50

Conclusion and Implications

The social impact assessment of Temsa-Ç.U collaboration cover the TEMSA internship (a 70-day long internship for the Automobile Engineering students), the material support given to the Hydromobile Team, 1.5 Adana Rocket Team and 1.5 Adana Electromobile Teams and the Temsa course delivered by Temsa professionals to the 4th grade Automobile Engineering students in 2021.

The SROI analysis of Temsa's collaboration with Çukurova University demonstrates that a total of **30,998.50** investment was transferred to the collaboration in 2021 and the total value of the social changes created by the collaboration is **439,596.01 TRY**, and the SROI rate of the collaboration is **14.18**.

The findings indicate that the highest total value has been generated for the 1.5 Adana Rocket Team and the 1.5 Adana Electromobile Teams. Therefore, it can be stated that the highest value was created for this stakeholder group in 2021. Followingly, among all stakeholders and outcomes, the increase in professional motivation (**82,804.22 TRY**) and increase in teamwork skills (**71,306.88 TRY**) of 1.5 Adana Rocket Team and the 1.5 Adana Electromobile Team members were identified as the outcomes that have the highest total value. In line with these findings, the second stakeholder that most benefited from the collaboration is found out to be the Hydromobile team members and the same outcomes (the increase in professional motivation (**37,684.67 TRY**) and increase in teamwork skills (**32,553.89 TRY**) have the highest total value. The difference between the values lies in the number of students; 1.5 Adana Rocket Team and the 1.5 Adana Electromobile Teams have more student members (almost three times more) than the Hydromobile team. That's why the values are higher for the 1.5 Adana Rocket Team and the 1.5 Adana Electromobile Teams. All in all based on social impact assessment, it can be stated that team members increased their motivation related to their professions, increased their teamwork and communication skills and consequently increased their chances of employability.

The Temsa-Ç.U collaboration also affected the Automobile engineering students who had their internships at Temsa. This stakeholder group benefited from the collaboration most after the team members. Following their 70 day internships, the highest valued outcome for the interns was the increase in their employability (**15,094.98 TRY**) followed by the increase in their sectorial motivation and knowledge (**10,670.41 TRY**).

The final stakeholder group affected by the collaboration is the Automobile engineering students who took Temsa courses for one academic term. Like the interns, similar outcomes were found out to be valued by these students although having different total values. To these students, the increase in sectorial motivation and knowledge (**5,286.22 TRY**) has a higher value than the increase in employability (**4,038.81 TRY**) as taking one course would have a slighter influence to being employed.

Besides all these outcomes experienced by main stakeholder groups, the graduate students and the faculty of the Automobile Engineering Department and Temsa professionals who lecture at the Department are also positively affected by the collaboration. Thereby, it will be noteworthy to underline that the collaboration creates social value beyond the calculated value. However, the collaboration has more potential to be realized and some recommendations in order to develop the impact potential of the collaboration is discussed in the following section.

Implications

The SROI analyses have pointed out some topics for improvement for the forthcoming periods of TEMSA-Çukurova University collaboration both in terms of activities and the impact measurement:

1. Establishing the Collaboration's Theory of Change by Having an Iterative Approach

Theory of Change can be considered as an action that will increase the impact created by making preliminary discussions with the beneficiary groups and main stakeholders and meeting the current needs before determining the activities. For instance, the academic studies based on industrial developments can be a collaboration activity which can create value for graduate students, the faculty and the Temsa professionals. Having round table discussions with the faculty can shed light on understanding the gaps and the needs of the department. Followingly, designing activities based on the stakeholder communication would increase the impact of the activities and the overall impact of the collaboration. Moreover, the SROI analysis indicates that the impact can be deeper and wider by covering graduate students and the academic staff.

Also, as the focus will be on understanding the needs and opinions of the stakeholders, following an iterative approach, through which testing and if necessary revising activities, outcomes and indicators, is also highly recommended. Additionally, the results of each data analysis would also give feedback about any revisions related to the Theory of Change (ToC) of the collaboration and for the design of future activities.

Thereby, we are proposing the following ToC for Temsa-Ç.U. Collaboration which will cover more stakeholders and activities for a deeper impact:

Figure 2 The Proposed Theory of Change

TEMSA-Ç.U. COLLABORATIONS THEORY OF CHANGE						
ACTIVITIES	INTERMEDIATE OUTCOME	FINAL OUTCOME	GOALS	ULTIMATE GOAL		
Collaborations with Çukurova University	I. Supporting the establishment of C.U. Automotive Engineering Department (AED) II. Supporting the activities of AED a. Providing infrastructure supports b. Establishing training ateliers and laboratories c. Temsa Course d. Providing material support for scientific meetings, conferences etc.	Undergraduate Students (AED)	Increase in professional knowledge and skills	Increase in sectorial motivation	Contributing to the socio-economic development of Adana region (Tukey) through investing in and attracting potential qualified technical staff for the automobile industry	
			Improvement in academic performance			Increase in employability
		Faculty Members (AED)	Increase in industrial awareness and knowledge	Increase in professional development		
			Increase in sectorial knowledge			
	Supporting AED project teams a. Hydromobile Team Supporting other departments' project teams (Electrical Electronics and Mechanical Engineering Dep.) a. 1,5 Adana Electromobile Team b. 1,5 Adana Rocket Team	Students in the Projects	Increase in the skill of putting theoretical knowledge into practice	Increase in sectorial motivation		Supporting the development of university students' professional skills and competencies
			Becoming more knowledgeable about industrial technological developments			
			Increase in teamwork skills			
	Know-How Support a. Occupation Seminars b. Scientific Projects (Tubitak, graduation projects etc.) c. Graduate Projects	Undergraduate & Graduate Students (AED)	Increase in professional knowledge and skills	Increase in sectorial motivation		Providing industrial knowledge for academic studies
			Improvement in academic performance			
		Faculty Members (AED)	Increase in industrial awareness and knowledge	Increase in professional motivation		
Increase in professional motivation						
Employment Opportunities a. Workplace Training Intern Program b. Temsa university visits c. Factory visits paid by university students	Intern Students Undergraduate Students	Improving knowledge and skills related with professional work experience	Increase in sectorial motivation	Providing employment for qualified university students		
		Developing self awareness about future career plans				
		Increasing sector related knowledge and skills				

2. Continuous measurement of the impact

As stated above, it is very critical to systematically measure the outcomes indicated in ToC and make necessary revisions. Otherwise, it will be difficult for managers to follow the progress of the collaboration and the extent of the impact generated. Therefore, it is recommended to determine the numerical outputs of the activities in the Theory of Change and the indicators for the changes and how these indicators will be measured before the activities start. For example, the question of what

indicators will be measured for sectorial knowledge and motivation outcomes should be answered before the Temsa course starts; this change can be measured before and after the Temsa Course through the pre-post tests. Therefore, indicator sets for each outcome should be determined and measurement tools should be prepared and applied for the systematic impact measurement of the collaboration.

3. Increasing Stakeholder Communication

The focus group interview data and the impact questionnaire responses indicate that the communication and information flow between TEMSA and the department, especially with the academic staff, can be increased for improving the impact of the collaboration. This can also contribute to developing more joint projects, even establishing joint laboratories (for instance for studying thermal battery management, wind tunnels, etc.), to carrying out both academic studies and for generating solutions to the current industrial problems. To the faculty members, the collaboration between TEMSA and the university were more active in 2017 and to increase the level of collaboration, the recommendation is to create opportunities for undergraduate, graduate, and doctoral students to work together in researches and being partners at TUBITAK (The Scientific and Technological Research Institution of Turkey) or similar projects. Similarly, both undergraduate and graduate students recommended that TEMSA could collaborate with the department for various R&D projects.

Additionally, it can be advised that regular project meetings should be held with the academic staff to develop further collaborative projects and the incentive system for Temsa professionals to enroll in graduate programs can be introduced for the efficient continuity of the collaboration. Consultation with the academic staff is critical in every aspect. For instance, as the instruction language is Turkish in the department, some precautions can be taken to overcome this barrier either by talking to the faculty who is in the strategic position to make decisions on this issue or by facilitating conditions for students to develop their English.

Another recommendation for developing interaction can be to increase the frequency of technical and social field trips, and to have smaller student groups rather than larger ones for more effective trips. Students are noted as interested in examining the production activities as complementary to their courses and seeing the theoretical explanation of the work in different departments in practice. It is also critical here to note that some students have an expectation from Temsa in terms of having close interest and communication related with the department. Similarly, they believe that Temsa's partnership with the department can be more visible and that Temsa can have a better presence and support and can create a stronger bond with the department.

4. Providing More Technical Support and Mentorship for Teams and Graduate Studies

Based on the focus group interviews and the impact questionnaires, it can be stated that both students and the academic staff find Temsa's support in their studies very important. In line with this, they require more support from Temsa in terms of funding for the development of laboratories or for increasing the experimental setups. Additionally, the maintenance of old labs and replacement of older equipment could also be supported by Temsa.

Similar courses to Temsa Course can also be designed and mentorship can also be provided to increase the impact generated. Students think that providing only a course is not fully sufficient to raise awareness of the young people about the dynamics of the sector. Moreover, providing technical support for 1.5 Adana and Hydromobile teams is very supportive but the value created can be accelerated by providing mentorship to these teams. Students in the teams also believe that seminars on engineering solutions would be beneficial to increase their success as a team.

All in all, support for applied training can be offered to transfer know-how and reach a more qualified workforce.

5. Providing Internships to a Higher Number of Students

In order to reach the goal of training qualified technical staff, the intern capacity can be increased by allowing more students to have an internship experience at Temsa. To the students, internship is the activity that has the most impact on their development. For this, short-term internships could take place during the year and business life experience starting from earlier terms (in the third grade etc.) can be offered. Also, some measures can be taken to increase the skills related with the internship process.

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Annexes

Annex 1. Focus Group Discussion Questions - TEMSA Project Team

1. For what reasons did you want to start the SROI study? With whom will you share the SROI study?
2. What is (are) your purpose(s) in supporting the establishment of the Çukurova University Automotive Engineering Department and in your further collaboration with the university? According to you, do these goals match with the goals of the university?
3. Who are your stakeholders in the establishment of Çukurova University Automotive Engineering Department and in your subsequent collaborations?
4. What resources do you use in the process? Which resources did you obtain from within the institution, and which sources from outside the institution? Have you recorded these?
5. What are your activities at Çukurova University?
6. Have you identified your outputs for collaborations? If yes, what are they? (For example, completing a 14-week of course, etc.)
7. According to you, who are the beneficiaries? Are there any beneficiaries that differ from others in terms of certain characteristics?
8. What kind of changes do you think you have created for your stakeholders?
9. How did you know that the change(s) in question had occurred? (According to you, what are the indicators? Do you have a record of these? For example, how many participants in which project)
10. Did any outcomes/changes occur other than what you have planned?
11. Do you think the change(s) in your stakeholders started simultaneously with your activities or did they start after the activities were completed?
12. What is the duration of the change/benefit obtained from the project in your opinion? In what time period will the beneficiary feel this impact? For example, if they are trained, how long can the validity of the knowledge and the impact of the learned knowledge on the person's life be?)
13. How would you rate your contribution to the realization of the change(s) in question? Evaluate the contribution of your project partners, if any, on a percentage basis. (Also, if the students had not received training from you, would the participants have had the same skills/training from other institutions?)
14. Were there any other people or groups that were positively or negatively affected in the process other than the beneficiaries?
15. Are there any other points you want to add?

Annex 2. Focus Group Discussion Questions - Students who are Interns at TEMA

1. How did you start your internship at TEMSA? Why did you choose TEMSA?
2. What is your role as an intern at TEMSA?
3. What did your internship process contribute to you? (Knowledge about the field, self-knowledge, etc.)
4. Did you take TEMSA courses during your education at the university?
5. In the scenario where TEMSA has no contribution to the department, what kind of differences do you think there would be in terms of both the university and your personal development?
6. Finally, do you have a memory/comment/criticism that you would like to share about your university and internship process?

Annex 3. Focus Group Discussion Questions - Hydromobile and 1.5 Adana Teams

1. Can you tell us about yourself, your department, and why did you choose this department?
2. How did you hear about Çukurova University's Electromobile Team? How did you get involved in the project?
 - To what extent do female students take part in such teams? Is there a demand?
3. In which year(s) did you take part in the Electromobile Team of Çukurova University? What role did you have in the team?
 - Did you provide any support to Çukurova University's Hydromobile Team? Are these two teams made up of different students?
4. Can you tell us about your process of taking part in the project? What was the experience like for you? What kind of experience do you think the students gain with the Electromobile Team?
 - a. How did you decide on the division of tasks within the team? What was it like working with students from different backgrounds?
 - b. How can participating in such a project benefit your business life?
5. What do you think is TEMSA's role in this project?
 - a. What was it like working with TEMSA employees? How was your communication?
 - b. How do you think TEMSA and TEMSA employees may have gained from this project?
 - c. What kind of positive/negative differences would there be in the case of another sponsor and not TEMSA?
6. What kind of difficulties did you encounter during the project process and in your relations with the team and TEMSA employees?
7. What do you think other university students, your families, and local people think about the 1.5 Adana project? Could they have been indirectly affected by this project? If yes, how?
 - a. Are there any other groups that you think may have been affected by this project?
8. In your opinion, what can TEMSA do to further increase the impact of this project? Do you have any suggestions about this?
9. Finally, do you have a memory/comment/criticism about the project that you would like to share?

Annex 4. Focus Group Discussion Questions - Graduate Students Working at TEMSA

1. Can you tell us about yourself?
2. Where and in which department did you complete your undergraduate education?
3. Are you a TEMSA employee? Did you do your internship at TEMSA? Or have you been involved in any TEMSA projects before?
4. Can you tell us about Çukurova University Automotive Engineering Department?
5. Do you remember or do you know about the seminar course given by TEMSA instructors in the last year of your undergraduate degree? In what ways do you think this course differs from the lectures (positively or negatively) of university academicians?
6. What were your reasons for choosing Çukurova University Automotive Engineering graduate programs?
7. Do you know your thesis topic? Does your thesis topic have a connection with TEMSA?
8. What can TEMSA do to improve its collaboration with the university?
9. Your department is in strong collaboration with the industry. In your opinion, how do such collaborations of companies like TEMSA contribute to students?
10. What kind of contributions have these kinds of collaborations on academia and literature?
11. TEMSA supports many projects at Çukurova University. What kind of changes do you think TEMSA's support can create for the university and students?
12. What kind of gains, tangible or intangible, do you think TEMSA can have from its cooperation with the department?
13. What is the overall image of TEMSA among students from automotive engineering and other departments?
14. When you think of the collaboration between TEMSA and Automotive Engineering Department, do you have any comments, suggestions, or moments you would like to share?
15. What would have happened if TEMSA had not contributed at all?

Annex 5. Impact Assessment Questionnaire - Çukurova University Automotive Engineering Department Undergraduate Students

1. Please indicate your undergraduate year or graduation status in the Çukurova University Automotive Engineering Department.
 - 1st
 - 2nd
 - 3rd
 - 4th
 - Graduate
2. Are you aware of the Çukurova University Automotive Engineering Department and TEMSA collaborations?
 - Yes
 - No
3. Did TEMSA have any role in your choice of Çukurova University Automotive Engineering Department?
 - Yes, TEMSA did have a role.
 - No, TEMSA did not have a role.
4. Evaluate the role of collaborations with TEMSA on your preference for the department.
 - 1
 - ...
 - 10
5. Did you take part in the 1.5 Adana Rocket Team, the 1.5 Adana Electromobile Team, and/or the Hydromobile Team?
 - Yes, I took part.
 - No, I did not take part.
6. Are you considering getting a postgraduate education in your department?
 - Yes
 - No
 - Not sure
7. Have you done an internship at TEMSA?
 - Yes
 - No
8. Would you like to do an internship or work at TEMSA? (You can tick more than one option).
 - I would like to do an internship at TEMSA in the future.
 - I would like to work at TEMSA in the future.
 - Currently, I'm working at TEMSA.
 - I do not intend to work or do an internship at TEMSA.
 - Other
9. Please share why you are not considering working or doing an internship at TEMSA.
...
10. Thanks to the support and collaborations TEMSA provides to my department, my probability of getting a job is _____. (Gaining information about corporate life, practice, and the sector with the course conducted by TEMSA, creating internship opportunities at TEMSA with the department protocol)
 - Unchanged
 - Increased
 - Decreased
11. How important is this change in your probability of getting a job for you?

- 1
 - ...
 - 10
12. In the scenario where TEMSA has no contribution to your department, would this change in your probability of getting a job still occur?
- Yes
 - No
13. If yes, what would be the percentage of change in your probability of getting a job in the scenario that TEMSA does not contribute to your department?
- 10%
 - ...
 - 100%
14. How long do you think the change in your probability of getting a job continue/will continue after graduation?
- 0-6 months
 - 7-12 months
 - 1-2 years
 - 4 years and more
15. Thanks to TEMSA's support to my department, my academic success is _____.
- (Establishment of laboratories and private classrooms with the support of TEMSA, obtaining practical knowledge with the TEMSA course, conducting academic studies for the industry with TEMSA collaborations)
- Unchanged
 - Increased
 - Decreased
16. How important is this change in your academic success for you?
- 1
 - ...
 - 10
17. In the scenario that TEMSA does not contribute anything to the department, would this change in your academic success still occur?
- Yes
 - No
18. If yes, what would be the percentage of change in your academic achievement in the scenario that TEMSA does not contribute to the department?
- 10%
 - ...
 - 100%
19. How long do you think the change in your academic success continues/will continue after graduation?
- 0-6 months
 - 7-12 months
 - 1-2 years
 - 4 years and more

20. Thanks to the support provided by TEMSA to my department, my skills in business life _____. (Gaining practical knowledge with the TEMSA course, strengthening access to up-to-date materials with the laboratory and infrastructure support provided by TEMSA to the department, sponsorship and mentoring support by TEMSA for school projects, TEMSA offering internship opportunities)
- Unchanged
 - Increased
 - Decreased
21. How important is this change in your business skills?
- 1
 - ...
 - 10
22. In the scenario that TEMSA does not contribute anything to the department, would this change in your business skills still occur?
- Yes
 - No
23. If yes, what would be the percentage of change in your business skills in the scenario that TEMSA does not contribute to the department?
- 10%
 - ...
 - 100%
24. How long do you think this change in your business skills continues/will continue after graduation?
- 0-6 months
 - 7-12 months
 - 1-2 years
 - 4 years and more
25. Thanks to TEMSA's support to my department, my sectorial awareness is _____. (With the TEMSA course, getting information about corporate life, practice and the sector, clarification of future plans)
- Unchanged
 - Increased
 - Decreased
26. How important is this change in your sectorial awareness for you?
- 1
 - ...
 - 10
27. If TEMSA does not contribute to the department, would this change in your sectorial awareness still occur?
- Yes
 - No
28. If yes, what would be the percentage of the change in your sectorial awareness in the scenario that TEMSA does not contribute to the department?
- 10%
 - ...
 - 100%

29. How long do you think this change in your sectorial awareness continues/will continue after graduation?

- 0-6 months
- 7-12 months
- 1-2 years
- 4 years and more

30. Please rank the possible changes that may result from TEMSA's contributions to the Çukurova University Automotive Engineering Department in order of importance. (Rank the achievements from 1 to 4, with the most important achievement being "1".)

- Increase in the probability of getting recruited
- Increase in the academic achievement
- Improvement in business skills
- Increase in sectorial awareness

31. Are there any other positive/negative changes you have experienced as a result of TEMSA department collaboration?

- Yes
- No

Please write these changes in the space below and rate the importance of these changes according to you from 1 to 10. (For example, my interest in automotive engineering has increased.)

- 1st change
- 2nd change
- 3rd change

1st change

- 1
- ...
- 10

2nd change

- 1
- ...
- 10

3rd change

- 1
- ...
- 10

32. What you would like to point out regarding the improvement of collaboration between TEMSA and the Çukurova University Automotive Engineering Department.

.....

Annex 6. Impact Assessment Questionnaire - Çukurova University Project Teams

1. Your department
...
2. Do you know about the support TEMSA provide to the Çukurova University Automotive Engineering Department?
 - Yes
 - No
3. Which project have you taken/ did you take part in? (You can tick more than one option.)
 - 1.5 Adana Rocket Team
 - 1.5 Adana Electromobile Team
 - Hydromobile Team
 - Other
4. Your role at the project:
...
5. Choose the option that suits you. (You can choose more than one option.)
 - I had an internship at TEMSA.
 - I am considering to have an internship at TEMSA.
 - I applied/will apply for a position to work at TEMSA.
 - I'm working at TEMSA.
 - Other
6. Select your postgraduate education status:
 - I am registered to the Automotive Engineering Master's Program.
 - I am registered to the Electrical and Electronics Engineering Master's Program.
 - I am registered to the Automotive Engineering Doctorate Program.
 - I am registered to the Electrical and Electronics Engineering Doctorate Program.
 - I am registered to the Mechanical Engineering Master's Program.
 - I am registered to the Mechanical Engineering Doctorate Program.
 - I am not registered in any graduate program.
7. Thanks to the project, my communication skills_____. (Communicating with Temsa professionals, working together with people from different backgrounds and cultures)
 - Unchanged
 - Increased
 - Decreased
8. How important is this change in communication skills for you?
 - 1
 - ...
 - 10
9. In the scenario TEMSA did not support the project, would this change in your communication skills still occur?
 - Yes
 - No
10. If yes, what would be the percentage of change in your communication skills in the scenario where TEMSA did not support the project?
 - 10%
 - ...
 - 100%

11. How long do you think the change in your communication skills continues/will continue after the project?

- 0-6 months
- 7-12 months
- 1-2 years
- 4 years and more

12. Thanks to the project, my teamwork skills _____. (Working together with Temsa professionals, working together with people from different backgrounds and cultures)

- Unchanged
- Increased
- Decreased

13. How important is this change in your teamwork skills for you?

- 1
- ...
- 10

14. In the scenario TEMSA was not involved in the project, would this change in your teamwork skills still occur?

- Yes
- No

15. If yes, what would be the percentage of change in your teamwork skills in the scenario where TEMSA was not involved in the project?

- 10%
- ...
- 100%

16. How long do you think the change in your teamwork skills continues/will continue after the project?

- 0-6 months
- 7-12 months
- 1-2 years
- 4 years and more

17. Thanks to the project, my professional skills _____. (Practicing technical knowledge and skills, developing problem solving skills, gaining design, business execution and planning experience in a professional project, and working together with professionals from the sector)

- Unchanged
- Increased
- Decreased

18. How important is this change in your professional skills for you?

- 1
- ...
- 10

19. In the scenario TEMSA was not involved in the project, would this change in your professional skills still occur?

- Yes
- No

20. If yes, what would be the percentage of change in your professional skills in the scenario where TEMSA was not involved in the project?

- 10%
- ...
- 100%

21. How long do you think the change in your professional skills continues/will continue after the project?
- 0-6 months
 - 7-12 months
 - 1-2 years
 - 4 years and more
22. Thanks to the project, my professional motivation _____. (Practicing technical knowledge and skills, gaining design, business execution and planning experience in a professional project, working together with professionals from the sector, gaining national and international professional experience)
- Unchanged
 - Increased
 - Decreased
23. How important is this change in your professional motivation for you?
- 1
 - ...
 - 10
24. In the scenario TEMSA was not involved in the project, would this change in your professional motivation still occur?
- Yes
 - No
25. If yes, what would be the percentage of change in your professional motivation in the scenario where TEMSA was not involved in the project?
- 10%
 - ...
 - 100%
26. How long do you think the change in your professional motivation continues/will continue after the project?
- 0-6 months
 - 7-12 months
 - 1-2 years
 - 4 years and more
27. Thanks to the project, my employability _____. (Practicing technical knowledge and skills, gaining design, business execution and planning experience in a professional project, working together with professionals from the sector)
- Unchanged
 - Increased
 - Decreased
28. How important is this change in your employability for you?
- 1
 - ...
 - 10
29. In the scenario TEMSA was not involved in the project, would this change in your employability still occur?
- Yes
 - No
30. If yes, what would be the percentage of change in your employability in the scenario where TEMSA was not involved in the project?
- 10%
 - ...
 - 100%

31. How long do you think the change in your employability continues/will continue after the project?

- 0-6 months
- 7-12 months
- 1-2 years
- 4 years and more

32. Please rank the changes resulting from the project in order of importance. (Rank the achievements from 1 to 5, with the most important achievement being "1".)

- Improvement in communication skills
- Improvement in teamwork skills
- Improvement in professional skills
- Increase in employability
- Increase in professional motivation

33.. Were there any other positive/negative changes resulting from the project you took part in?

...

34. Please write these changes below and rate the importance of the changes according to you from 1 to 10. (For example, my self-confidence has increased)

- 1st change
- 2nd change
- 3rd change

1st change

- 1
- ...
- 10

2nd change

- 1
- ...
- 10

3rd change

- 1
- ...
- 10

35. Your comments on the improvement of TEMSA supported projects:

.....