

Impact and Sustainability

Engineering Project 2026 fall semester

Innovation for Impact

Team identity · Engineering Project 2026



ASSIGNED TOPIC AREA

Impact & Sustainability

CORE COMPETENCIES

Sustainability & environmental impact analysis
Research & data analysis

Renewable energy & life-cycle thinking
Impact measurement & communication

PERCEIVED STRENGTHS

Multidisciplinary engineering perspective
Strong analytical and problem-solving skills
Combination of technical, industrial & digital knowledge
Ability to evaluate both technical and sustainability impacts

PERCEIVED WEAKNESSES

Limited experience with formal sustainability/LCA methods
Limited Solaric-specific performance data and Exp
Need to integrate different engineering perspectives

Zeeshan Nazir

Team Leader



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BACKGROUND

Nationality

Pakistan

Degrees

BSc Industrial Engineering, UET
Peshawar

Work experience

Quality Assurance, Sports Industry, 3 Yrs

Areas of expertise

Team Leading, Audits, RCA, R&D,
Sustainability

PERSONAL PERSPECTIVE

I believe engineering solutions should create measurable value while reducing environmental impact.

INTERESTS

New Business Ideas
Innovation in SMDs
Anime
Personal Development

PROJECT IDEAS

Maximize Solaric's environmental impact through efficient, sustainable solar solutions.

Thuzar Aung

Business and Market Strategy



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BACKGROUND

Nationality

Myanmar

Degrees

Electronic Engineer
Government Technology College
(Shwebo)

Work experience

One year Experience in Production and Industrial Field and 5 years in Start Up small business owner in Rural Area

Areas of expertise

Business Strategy and Customer Relationship

PERSONAL PERSPECTIVE

To be a successful project, we need to combine the Technology and Business Strategy correctly. We need to focus not only Technology but also Market and Consumer.

INTERESTS

Book Reading, Travelling, Communicate to new place and people, Innovation and strategy of Idea

PROJECT IDEAS

Circular Solar Hub for Rural Communities

SIRI RAMACHANDRA

TECHNOLOGY FORESIGHT RESEARCHER



BACKGROUND

Nationality

India

Degrees

Bachelors in Computer Science and Engineering, Dayanad Sagar Bangalore

Work experience

Industry Process Consultant Intern - 7 months

Areas of expertise

Software development, Python, SQL, data analysis, AI/ML fundamentals, business process analysis, and technology management.

PERSONAL PERSPECTIVE

I look forward to exploring sustainable ways of building and creating while protecting resources and making responsible use of available materials.

INTERESTS

[How can technology serve real-world problems

PROJECT IDEAS

Develop a concept for using umbrella technology in seawater desalination as a potential solution to freshwater shortages.

Hsu Lae Wa Ti

PRESENTATION AND COMMUNICATION



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BACKGROUND

Nationality

Myanmar

Degrees

Bachelor of Engineering (Electronics)
Technology University (Lashio)

Work experience

Junior Supervisor (Dec 2023- April 2024)
Facility Department of Telecommunication Operation

Areas of expertise

Presentation • Communication • Electronics • Teamwork

PERSONAL PERSPECTIVE

I believe that clear communication and good teamwork are essential for turning a technical idea into a successful product.

INTERESTS

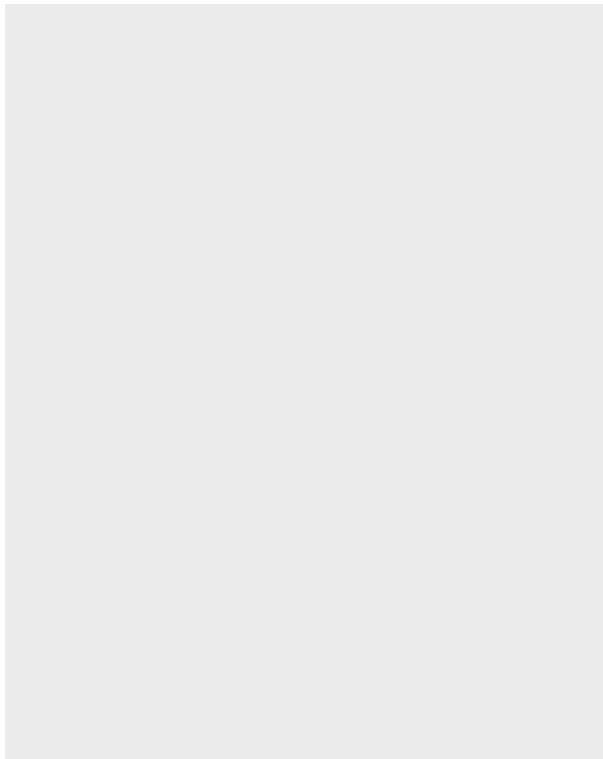
Renewable energy • Solar technology •
Sustainable products • Innovative
design

PROJECT IDEAS

[Developing a solar umbrella that combines practical outdoor use with renewable energy, while communicating its benefits clearly to users.]

[Tuba Fiaz]

[Process & Analysis Lead]



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BACKGROUND

Nationality

[Pakistani]

Degrees

[Degree(s) and institution(s)]

Work experience

[Industrial Engineer, Football manufacturing, 3 years]

Areas of expertise

[Lean manufacturing, Process flow improvement]

PERSONAL PERSPECTIVE

[I believe improvement should be practical, measurable, and driven by real problems]

INTERESTS

[Automation, Football manufacturing operations]

PROJECT IDEAS

[Focuses on process analysis, improvement opportunities, and evidence gathering.]

Our understanding of the challenge

Turn Döschson's challenge into a shared, testable problem statement

THE CHALLENGE IN OUR OWN WORDS

How can Solaric **maximize** the environmental, social and economic impact of its **solar umbrella** while improving its **long-term sustainability** and **practical value** for users?

WHO IS AFFECTED?

- Solaric customers and users of the solar umbrella
- Solaric's manufacturing and supply-chain stakeholders
- Local communities and the environment

WHY DOES IT MATTER?

- **To prove the real value of Solaric's product**, beyond simply generating solar electricity.
- **To identify where environmental impacts occur** and where the product can become more sustainable.
- **To support better design and business decisions** as Solaric develops and scales its products.

WHAT WOULD SUCCESS LOOK LIKE?

- knowing the product's real impact, identifying where it can improve, and giving Solaric measurable ways to track that improvement.

OPEN QUESTIONS

- What factors most affect sustainability performance?
- How can environmental, social, and business value be balanced?
- How will impact be measured?

KEY ASSUMPTIONS

- Adequate solar energy is available.
- Users adopt the solution as intended.
- Sustainable design remains economically viable.

Our contribution to project success

Make the team's distinctive value, ownership, and evidence explicit

OUR DISTINCTIVE CONTRIBUTION

The project needs our team to ensure that the Solar Umbrella delivers measurable environmental, social, and economic value while remaining sustainable throughout its lifecycle.

CAPABILITIES WE BRING

- Sustainability expertise
- Impact analysis
- SDG knowledge
- Life-cycle thinking
- Stakeholder perspective

OUTPUTS WE WILL OWN

- Sustainability plan
- Impact analysis
- CO₂ assessment
- Material guidance
- Impact report

EVIDENCE OF IMPACT

- Sustainable design achieved
- Impact quantified
- Recommendations adopted
- User value improved
- Findings documented

MOST IMPORTANT PRIORITY

Ensure the Solar Umbrella provides real environmental benefits and aligns with sustainability goals without compromising functionality or cost-effectiveness.

BIGGEST RISK TO OUR CONTRIBUTION

Limited data on energy production, usage patterns, or material impacts may reduce the accuracy of our assessment.

How we will work with other teams

Map the information, decisions, and deliverables that must cross team boundaries

OTHER TEAM	WE NEED FROM THEM	WE PROVIDE TO THEM	WHEN / TRIGGER	OWNER
Materials & Performance	Material composition, recyclability, toxicity level, and life span data	Sustainability criteria, Eco-design guideline and compliant green material alternatives	During the initial material selection phase and final prototype evaluation	Abdullah Khan
Thermal & Durability	Product lifespan data, thermal efficiency rates, and failure/maintenance metrics	Target lifespan requirements, eco-friendly thermal management guidelines, and end of life recycling design	During thermal architecture design and environmental stress testing	
Software & Modelling	Real time energy output data, digital twin simulation results, CO2 reduction metrics	Sustainability KPIs, carbon footprint targets, and eco-friendly user interaction guidelines	During the system architecture design and UI dashboard prototyping phase	Miad Bin Mostatiz
Markets & Application	Target market segments, geographic locations, and customer willingness to pay for green features	Sustainability value proposition, green certifications, and circular economy business models	During market analysis and business model canvas creation	Wafa Zehra

COORDINATION ROUTINE

- Weekly cross-team check-ins
- Shared project updates and progress tracking
- Feedback at key milestones

LIKELY FRICTION POINT

- Conflicting priorities between sustainability and cost
- Limited data for impact assessment
- Delays in receiving technical information from other teams