

CONSTRUCTION RAPID MARKET ASSESSMENT BRIEF

Lebanon



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EXECUTIVE SUMMARY

The SILA Program's Construction Sector Rapid Market Assessment highlights critical skill gaps and structural challenges in Lebanon's construction industry. The sector has been hit by successive crises, the financial collapse, Beirut Port explosion, COVID-19, and the 2023–2024 war, which halted projects, drove skilled professionals abroad, and eroded trust. Still, reconstruction needs and regional labor demand create opportunities for recovery and growth.

On the demand side, companies and freelancers stressed weaknesses among technicians: outdated knowledge, weak communication, poor time management, limited software use, and low safety awareness. Young professionals were seen as underprepared in BIM/Revit, 3D modeling, project management, and contract law, despite strong theoretical backgrounds.

On the supply side, technicians across trades, electricians, carpenters, aluminum & glass, plumbers, steelworkers, and painters, relied heavily on informal training and reported outdated tools, rising costs, and shrinking opportunities. Youth in technical schools and young professionals showed strong motivation but emphasized the need for practical, market-oriented skills to bridge the gap between education and work.

The value chain analysis revealed systemic constraints: financing shortages, emigration-driven labor gaps, weak regulatory enforcement, material challenges, and limited sustainability uptake. At the same time, it identified opportunities to modernize skills, link education with industry, strengthen safety standards, and expand access to regional markets.

1. Introduction



The SILA Program's Construction Sector Rapid Market Assessment was undertaken to guide the second phase of interventions in Lebanon's construction sector. Building on the Tafawok Program (2020–2024), which supported hundreds of Micro and Small Enterprises (MSEs), professionals, and youth, SILA aims to deliver a more targeted and sustainable response to current realities.

The sector, once central to Lebanon's growth, has been severely weakened by successive crises such as the financial collapse of 2019, the Beirut Port explosion in 2020, the COVID-19 pandemic, and the 2023–2024 war. These shocks disrupted projects, accelerated the emigration of skilled professionals, and reduced market trust. Yet, reconstruction needs and regional demand for skilled labor still present opportunities for job creation, upskilling, and sectoral recovery.

This assessment seeks to identify critical workforce gaps, analyze challenges across the construction value chain, and provide recommendations to guide SILA's future training interventions and partnerships.

2. Methodology

The assessment applied a mix of desk research, surveys, interviews, and pilot workshops. Existing reports were reviewed to capture sector trends and constraints. Structured surveys were conducted with over 120 stakeholders, with a focus on the Beirut and Mount Lebanon area as aligned with the project's focus areas. This included:

- Company managers and senior professionals (engineers, architects, interior designers).
- Experienced freelance professionals with more than a decade of practice.
- Young professionals in the early years of their careers.
- Technicians across trades such as plumbing, carpentry, electricity, painting, aluminum/glass, and steelwork.
- Students in technical schools currently pursuing construction-related education.

These perspectives reflect both the demand side (firms and senior professionals) and the supply side (technicians, youth, and students). Drawing on contributions from across the supply chain, the assessment highlights key skill deficiencies, examines sector barriers and opportunities, and points to practical measures to guide SILA's training efforts and partnerships.

Additional insights came from semi-structured interviews with architects, engineers, business owners, and educators. A workshop with 13 professionals at the Order of Engineers and Architects explored value-chain gaps, training needs, and regulatory barriers. Finally, pilot training sessions tested course formats and collected feedback, ensuring recommendations remained grounded in workforce realities.

3. Findings

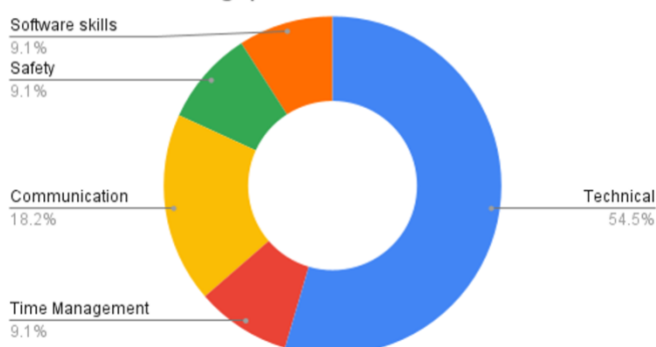
DEMAND-SIDE FINDINGS

COMPANIES

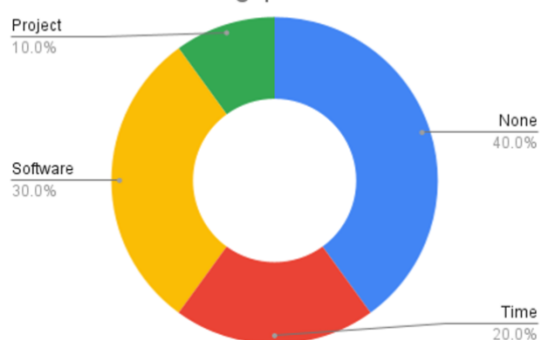
Ten senior professionals from engineering, architecture, and interior design firms shared their perspectives as employers. Their main challenges in working with technicians were:

- Outdated technical knowledge (cited by more than half of firms).
- Weak communication, with reliance on informal agreements.
- Poor time management, as technicians often handle multiple jobs at once.
- Limited software use, especially in AutoCAD.
- Low safety awareness, with limited protective practices on site.

Technicians skills gaps & needs



Professionals skills gaps & needs



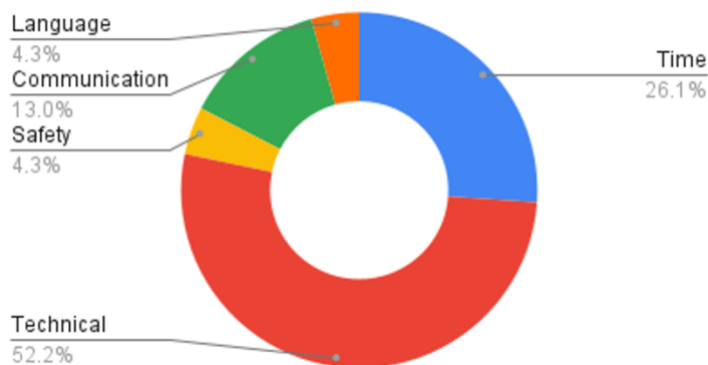
Firms also evaluated younger professionals. They noted weak proficiency in modern design software (particularly BIM tools like Revit), poor project and time management, and limited exposure to new materials or smart technologies. Employers emphasized the need for a stronger technical foundation, coupled with awareness of innovations such as AI design tools.

FREELANCERS

Sixteen freelance professionals (architects, engineers, interior designers) reported concerns similar to firms. Their difficulties with technicians included outdated methods, poor time management, weak communication, and inconsistent use of safety standards.

Freelancers stressed the need for technicians to upgrade their knowledge, adopt smart technologies, and become familiar with new building materials to remain competitive.

Technicians skill gaps & needs



They were also critical of young professionals, noting limited digital skills, weak time management, and inadequate understanding of construction law and contracts. Keeping pace with software (Revit, 3D modeling) and fast-changing material trends was highlighted as a priority for career progression.

Professionals skill gaps & needs



Both employers and freelancers point to the same bottlenecks: technicians need updated practices, stronger communication/time management, better safety habits, and basic digital skills; young professionals need BIM/3D proficiency and practical project/contract management.

SUPPLY-SIDE FINDINGS

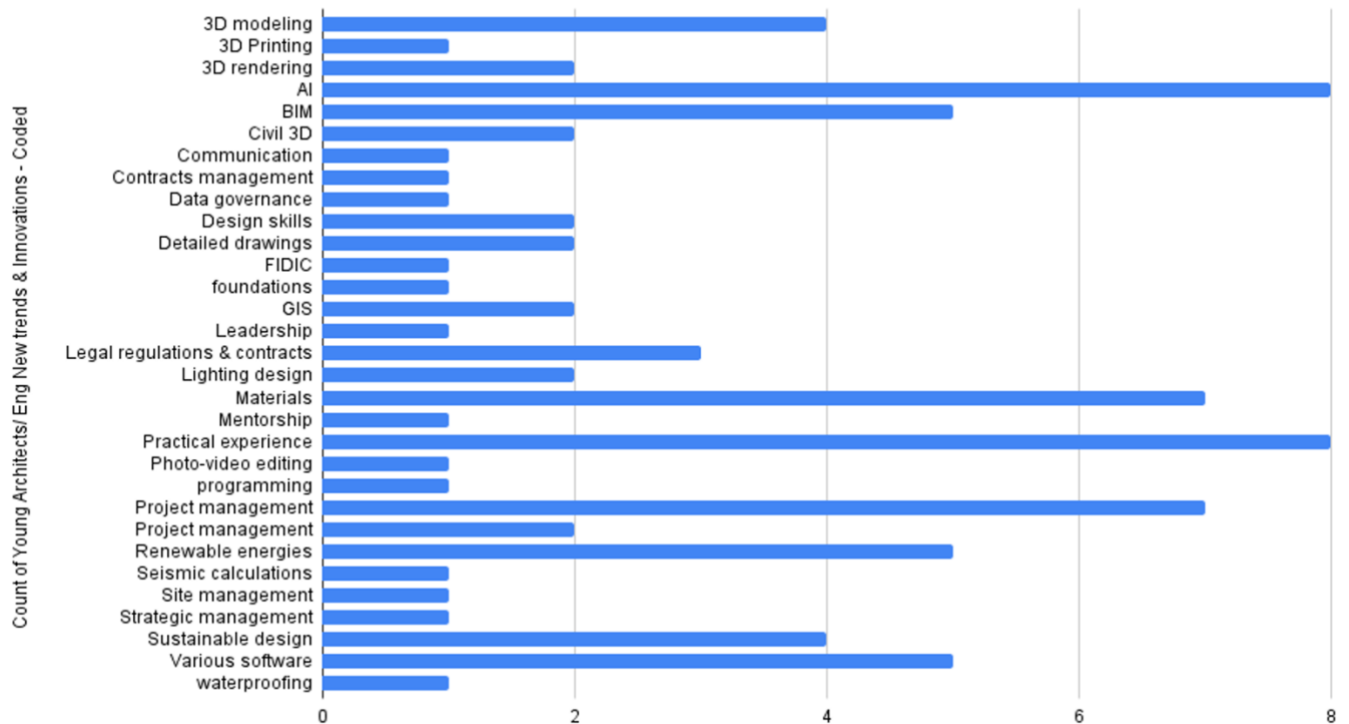
YOUNG PROFESSIONALS

Surveyed early-career professionals showed strong motivation to expand their skills but highlighted important gaps between academic training and workplace needs. They reported:

- Technical and software skills: Desire to improve proficiency in modern tools such as BIM/Revit, 3D modeling, and explore emerging AI applications in design and engineering.
- Soft and management skills: Need for better project/time management, communication, and practical site experience to complement their theoretical education.

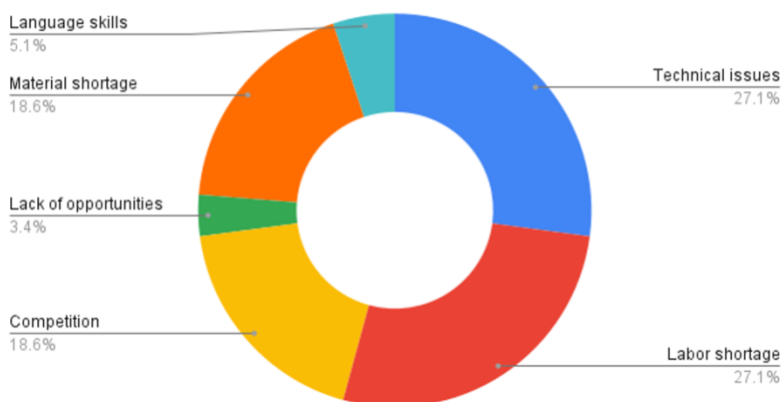
The graph below breaks down these priorities in more detail, showing the specific skills and knowledge areas young professionals identified as gaps. It highlights especially strong demand for AI, BIM, materials knowledge, practical experience, and project management, alongside interest in sustainability and advanced design tools

Count of Young Architects/ Eng New trends & Innovations



TECHNICIANS

Technicians - Main Challenges



Technicians across plumbing, carpentry, electricity, painting, aluminum/glass, and steelwork were surveyed. Most learned informally on site and bring long hands-on experience, yet many lack exposure to modern practices and business skills.

Many also reported reduced workloads in recent years and pointed to obstacles such as technical/tooling issues, labor shortages, material access/cost, competition, language skills, and fewer opportunities.

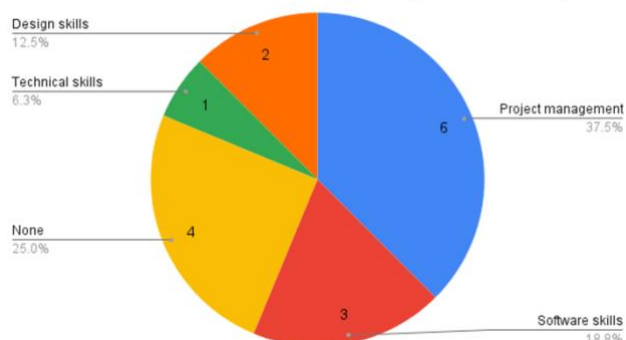
YOUTH IN TECHNICAL SCHOOLS

Students in technical schools represent the future supply of skilled labor. Many expressed interest in complementary training, though most were not sure which areas to prioritize until topics were suggested. Once prompted, their strongest interests included:

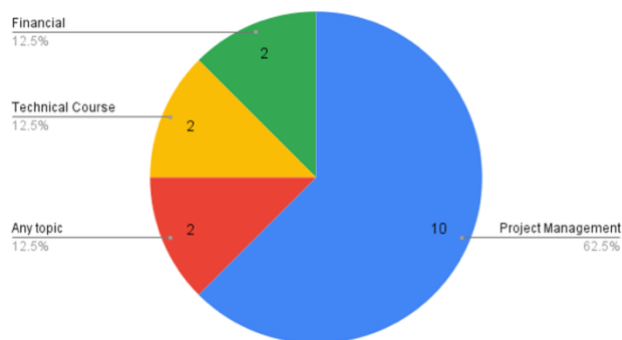
- Project and financial management to help them handle real-world work requirements.

- Trade-specific technical courses and advanced software relevant to their specialization (e.g., interior design, HVAC, electrical, construction, architectural design).

Technical Students - Needed Skills (Missing from Curricula)



Technical students - Topics of interest



Overall, both young professionals and technical-school students are eager to strengthen their skills but need structured opportunities that bridge academic learning with workplace realities. Their priorities combine advanced technical training (software, design, materials) with core management and practical skills that will allow them to perform effectively on site.

4. Trade-specific priorities

Across trades, labor shortages stand out as a common concern, compounded by outdated tools, rising material costs, and reduced opportunities since the crisis and war. Electricians add challenges with obsolete equipment and mounting competition. Carpenters highlight rising prices and pressure from lower-wage competitors. Aluminum & glass contractors struggle with old machinery, material constraints, and a shrinking market. Plumbers point to payment delays, tight deadlines, and technical hurdles. Steelworkers face unrealistic design requests, limited modern tools, and frequent power cuts. Painters emphasize waterproofing and humidity problems, along with costly materials, rework, and weaker demand.

The following table presents a summary of the upskilling needs. For each trade, it lists priority technical topics identified by respondents, the tools/technologies to focus on, and the soft/business skills that help win and deliver work.

Group / Trade	Core Technical Upskilling (Examples)	Tools / Tech Focus	Soft / Business Skills
Electricians	Automation & smart systems; ATS; batteries/solar systems.	Safer/qualified solar installs (formal training noted by seniors).	English for configuring automation interfaces; digital marketing & networking to reach clients.
Carpenters	New carpentry materials; updated techniques (e.g., laminated wood).	<i>Limited emphasis on tools; focus on techniques/materials</i>	Networking/exposure; marketing/advertising; English.
Aluminum & Glass	Operate updated machinery/cutters; know newer	Updated aluminum machines & cutting equipment; wider material knowledge.	Some interest in marketing/advertising.

	profiles/materials (e.g., Hardeman).		
Plumbers	New piping systems (PEX, PVC, PPR); inspection cameras; boiler & gas systems; design/maintenance basics.	Inspection cameras & modern systems.	Time & communication skills highlighted by employers to improve delivery.
Steelworkers	Use shaping/cutting/bending machines; know new steel types (e.g., Arco); basic AutoCAD for shop drawings.	AutoCAD for shop drawings; collaboration with engineers/designers.	English; marketing/advertising to expand business.
Painters	Decorative techniques; waterproofing; paint guns & furniture finishing.	Hands-on sessions valued (pilot training feedback).	Digital marketing; English; safety practices.
Youth in technical schools	Complement formal education with project management, advanced software/design, and trade-specific technical courses; many open to suggested topics.	Programs most populous: Interior Design; HVAC/Electrical/General Construction; Architectural Design (useful for targeting).	Interest in project & financial management; broader soft-skill readiness for labor market.

The supply side is experienced but not fully market-ready: technicians need updated methods, modern tools, and basic business skills, while young professionals need stronger software and project/practical competencies.

5. Challenges Recommendations

The construction sector in Lebanon is shaped by interconnected challenges across financing, design, materials, and labor, which collectively hinder recovery and growth. These obstacles, however, also point to clear entry points for targeted interventions—ranging from skills development and better regulation to improved access to finance and sustainable practices.

Key Challenges	Opportunities & Recommendations	Identified Skills Gaps & Market Needs
Financing constraints (loss of housing loans, devaluation, reliance on “lollars,” investors shifting abroad)	Develop blended finance models; support affordable credit; facilitate project-based lending	Financial literacy for SMEs; business planning; cost estimation
Planning, design & commissioning gaps (staff emigration, reliance on freelancers, inconsistent quality, corruption in permitting)	Build stronger project management capacity; digitalize permitting; enforce regulations	Project management skills; contract law knowledge; BIM/Revit adoption

Material shortages & quality issues (import restrictions, counterfeit solar components, high costs)	Strengthen quality control; promote trusted suppliers; explore local substitutes	Materials testing & certification; sustainable material knowledge
Construction workforce reliability (skilled labor emigration, weak time management, low safety culture)	Upskill technicians in modern practices; expand safety training; incentivize retention	Safety awareness; modern site techniques; time & team management
Property market stagnation (domestic demand collapse, clients shifting abroad)	Support firms to access regional markets (e.g., KSA, Cyprus, Greece); stimulate local reconstruction projects	Export readiness; client negotiation; cross-border contract management
Weak sustainability uptake (low adoption of energy-efficient systems and circular practices)	Promote training in solar, green construction, and energy efficiency; strengthen enforcement of standards	Solar installation; energy efficiency design; sustainable building practices

6. Conclusion

The assessment shows that Lebanon's construction sector faces intertwined challenges, financial, regulatory, material, and workforce-related, that weaken both demand and supply. Yet, these constraints also reveal opportunities for targeted training, regulatory reform, and improved financing models that can unlock the sector's potential. Addressing skill gaps while enabling firms to access domestic reconstruction and regional markets positions interventions to have a broad and systemic impact.