



Business domain Construction

Group P1T12

João Costa (99088)
João Marques (99092)

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Business domain and its context

- Residential construction is a vital sector within the broader construction industry, addressing the need for shelter and accommodation.
- It caters to the increasing demand for housing driven by population growth and urbanization.
- Businesses in this sector offer a variety of products and services, including single-family homes, townhouses, condominiums, and apartment complexes.



Business domain and its context

- Products range from affordable housing units to luxury homes, meeting diverse homeowner preferences in size, design, amenities, and energy efficiency.
- Services cover the entire construction process, from planning and design to construction management and post-construction services.
- This includes architectural design, engineering, site preparation, construction labor, project management, and quality assurance.



Business domain and its context

- Residential construction firms typically operate using project-based models or engage in speculative homebuilding.
- Stakeholders include homeowners, developers, construction companies, subcontractors, suppliers, regulatory authorities, and financial institutions.
- Governance ensures effective management and direction, focusing on transparency, accountability, and ethical behavior.
- Risk management is crucial for mitigating uncertainties such as cost overruns, delays, and quality issues.
- Compliance with building codes, regulations, and industry standards ensures safety, quality, and legality.
- Key performance indicators (KPIs) include project cost, schedule adherence, quality defects, customer satisfaction, safety incidents, and IT-related metrics like project management software usage and information security.



Main challenges in relation to the use of IT

- **Resistance to Change:** Traditional mindset in construction industry, resistance from stakeholders.
- **Complexity of Projects:** Highly dynamic, variable projects.
- **Adapting AI:** Robust models, analyzing large datasets, accounting for uncertainties.
- **Ethical Implications:** Biases, errors, safety risks.
- **Ensuring Ethical Use:** Addressing bias, transparency, accountability, legal considerations.
- **Opportunities:** Revolutionizing construction - efficiency, innovation, sustainability

References

- [1] <https://www.goconstruct.org/construction-careers/browse-all-job-roles/> accessed on 1/5/2024
- [2] <https://safetyculture.com/topics/residential-construction/> accessed on 4/5/2024