# 2. [FRONT-END PLANNING: BREAK THE RULES, PAY THE PRICE (RS213-1)](https://www.construction-institute.org/front-end-planning-break-the-rules-pay-the-price)

**Report Summary:** Front-end planning is often considered the single most important and valuable process in the capital project life cycle. Also known by such terms as pre-project planning and front-end loading, it represents the critical underpinning to any capital project. It is focused on a strong, early link between the business or mission need, project strategy, scope, cost, and schedule and maintaining that link throughout the project life cycle. Front-end planning mainly covers three sub-phases: 1) Feasibility, 2) Concept, and 3) Detailed Scope.

The research team found that upfront investment is required, but the resulting savings are more than worth the investment. The team also developed the following critical “rules” of front-end planning:

* Develop and consistently follow a defined front-end planning process.
* Ensure adequate scope definition prior to moving forward with design and construction.
* Use front-end planning tools.
* Define existing conditions thoroughly.
* Select the proper contracting strategy early.
* Align the project team, including key stakeholders.
* Build the project team, including owner stakeholders and consultants.
* Include involvement from both owners and contractors.
* Staff critical project scoping and design areas with capable and experienced personnel.
* Identify and understand risks of new project types, technologies, or locations.
* Address labor force skill and availability during planning.
* Provide leadership at all levels for the front-end planning process, including executive and project, owner and contractor.

Projects teams and organizations that break these “rules” will pay the price in terms of disappointing results.

**Key Takeaways:**

## (1) Define the project scope prior to moving forward with the design and construction phases.

## (Project Phase: Prefeasibility through Turnover)

* Use front-end planning tools such as the Project Definition Rating Index to aid in defining the project scope.
* Conduct thorough stakeholder identification and partnering to ensure that all project elements are defined early in the project.
* Develop a clear team charter that outlines the project goals, objectives, and roles for all stakeholders.
* Ensure that the technical scope is identified and agreed upon by all parties involved in the project.
* Verify that adequate resource expenditures (3% to 5% of total installed cost) have been made during the front-end planning phase.

## (2) Align the project team members, including key stakeholders.

## (Project Phase: Prefeasibility through Turnover)

* Define clear goals and objectives with all stakeholders to ensure a common understanding of the project scope.
* Identify and involve key stakeholders in front-end planning activities to prevent later project problems.
* Develop accountability and responsibility among team members through regular meetings and progress updates.
* Use the Construction Industry Institute’s Alignment Thermometer tool to measure stakeholder alignment and identify potential issues early in the project.
* Foster open communication channels with all stakeholders, including consultants and contractors, to ensure that everyone is working towards the same objectives.

## (3) Build the project team, including owner, stakeholders, and consultants.

## (Project Phase: Prefeasibility through Turnover)

* Define the project’s goals and objectives with all stakeholders to ensure a common understanding of the project scope.
* Develop accountability and responsibility among team members through regular meetings and progress updates.
* Involve key stakeholders in front-end planning activities to prevent later project problems.
* Foster open communication channels with consultants, contractors, and other stakeholders to ensure that everyone is working towards the same objectives.
* Establish a clear understanding of the roles and responsibilities of each team member within the project team.

## (4) Involve both owners and contractors.

## (Project Phase: Prefeasibility through Turnover)

* Engage with consultants early in the planning process to ensure that their expertise is incorporated into the project goals.
* Foster open communication channels with contractors by scheduling regular meetings and progress updates.
* Collaborate with contractor representatives on front-end planning activities, such as developing the project scope and schedules.
* Encourage contractor involvement in stakeholder identification and risk assessment exercises to prevent later project problems.
* Establish a clear understanding of the roles and responsibilities of the members within the project team through joint owner-contractor communication.

## (5) Staff critical project scoping and design areas with capable and experienced personnel.

## (Project Phase: Prefeasibility through Turnover)

* Assemble a team of experts in piping design, equipment design, and construction to ensure the thorough understanding of the project requirements.
* Assign experienced professionals to lead project teams that are responsible for the scope definition, schedule development, and budgeting.
* Recruit skilled staff members who are familiar with unique project characteristics, such as new technologies or locations, to mitigate risks.
* Ensure that key personnel are involved in front-end planning activities from the outset to provide valuable insights.
* Utilize contractors' expertise by incorporating their experienced professionals into the project team during the scoping and design phases.

## (6) Refer to the following Best Practices sections in this report for other takeaways that are relevant to front-end planning: 7. Front-end Planning and 14. Project Risk Assessment

## (Project Phase: Prefeasibility through Turnover)