

## Technical Assessment

Technical assessment is the second criteria for evaluating the project. Technical assessment of a proposed system evaluates **functionality** against available:

- Hardware
- Software
- **Limitations**
  - Nature of solutions produced by strategic information systems plan
  - Cost of solution. Hence undergoes cost-benefit analysis.

It is also referred as Technology Evaluation. The Technology Assessment is a write up on the technical aspects of the project sector and planned technical purchases. Technology is defined broadly here to include: equipment, tools, products, processes, raw materials, skills, and ways of organizing production.

### **Assessing Technology Planning:**

- Analyze Technology Needs
- Planning for Change and Technology
- Assessing a Technology Plan Before and After Implementation

### **Why it is important?**

- It's a tool to Identify the Problem
  - At the core of any project is a series of big and small problems that need to be addressed (ex: not enough production capacity, staff lacks required skills, overly expensive transportation, etc.)
  - Reviewing the production process including the systems and equipment in place provides transparency into what some of the constraints are. Some will be obvious, but others may be hidden until you take a closer look.
  - Not all constraints will be technical, so this is just one investigative tool needed.
- It's a tool to Identify the Best Solution
  - Once you know what the technical problems are, you can start to look for solutions.
  - The Technology Assessment provides the opportunity to explore potential solutions (ex: new equipment choices, new crop varieties, new fertilizers, changes in process, etc.)
  - The grantee often has a solution in mind when they propose the project, but further analysis can lead to more creative, better fitting, and more cost effective solutions.
  - The grant budget is limited, so looking at the options in a systematic way helps the grantee understand the tradeoffs with implementing one technical solution or another. Knowing this, they can make more informed decisions about using scarce budget resources.

➤ It's a tool for Communication

- The write-up documents the background work and thinking on technical issues that has gone into the project design and budget.
  - (1) The more people understand the logic of the proposal, the more they can help brainstorm on solutions or help catch problems that might not have been fully addressed.
  - (2) A clear presentation will reduce questions from ADFW on the project proposal and will help them better understand the design choices despite not being present for all of the partner discussions with the grantee.
- It serves as a record and resource for the grantee in case they need to go back and reconsider the options at a later date.

**Purpose:**

- Technology assessment provides an organization with information about the profitability of current technology as well as the benefits of implementing new technology.
- Ineffective technology needs to be upgraded or replaced for businesses to produce quality products or services.

**Types of Assessments:**

Technology assessment can happen on several levels: flexibility, longevity and upgrade and scale-assessments. To assure that an organization can remain competitive, every aspect of its technology system must be in excellent operating condition. Assessment on all four levels improves the chances of this happening.

**Flexibility / Longevity**

- Flexibility assessment examines how technology will adapt to new levels of applications and other technology systems.
- Longevity assessment provides information on how long the technology will last.

**Upgrade /Scale Assessments**

- An upgrade assessment determines the ability of the technology to function with the addition of new, advanced features and equipment.
- Scale assessment considers how well the technology can operate in a larger, ever-growing network of systems. The growth of an organization means developing a larger technology system. New technology must be able to be incorporated into new, expanding net

**Evaluate the Technology options on the following factors:**

- Fixed capital costs
- Source of equipment
- Operation, maintenance, and replacement costs
- Scale of production and expected capacity use rate
- Reliability
- Labor intensiveness (labor costs, productivity, and employment generation)
- Types and amounts of inputs required
- Raw material availability, sustainability, and cost
- Effects on product quality, cost and marketability
- Foreign exchange requirements and availability
- Natural resource requirements and sustainability
- Compatibility with existing technology in use
- Human resource requirement (training and technical assistance costs, management and supervision costs, etc)