Which of the following best describes the ***Level of New Development*** for this project?

1. No new software development / exclusively based on COTS software and hardware or based on existing, proven software and hardware.
2. Primarily COTS software / hardware or existing software / hardware based with some new software development or new functionality added to existing software—evolutionary development.
3. New software development for new system, replacement system, or major system expansion including use of COTS software. Implementation of new COTS hardware.
4. Revolutionary development—entirely new software development including integration with COTS or existing legacy system software. Implementation of new COTS hardware or even prototype hardware.

Rationale:

**Answer Number: [ ]**

Which of the following best describes the ***Scope and Breadth of Technologies*** for this project?

1. Application of proven, well-known, and commercially available technology. Small scope both in terms of technology implementation (e.g., only CCTV or DMS system) and size of implementation (i.e. pilot project). Typically implemented under a single stand-alone project, which may or may not be part of a larger multiple phase implementation effort.
2. Primary application of proven, well-known, and commercially available technology. May include non-traditional use of existing technology(ies).Moderate scope in terms of technology implementation (e.g., multiple technologies implemented, but typically no more than two or three). May be single stand-alone project, or may be part of multiple-phase implementation effort.
3. Application of new software / hardware along with some implementation of cutting-edge software, hardware, or communication technology. Wide scope in terms of technologies to be implemented. Projects are implemented in multiple phases.
4. New software development combined with new hardware configurations / components, use of cutting-edge hardware and/or communications technology. Very broad scope of technologies to be implemented. Projects are implemented in multiple phases.

Rationale:

**Answer Number: [ ]**

Which of the following best describes the need for ***Interfaces to Other Systems*** for this project?

1. Single system or small expansion of existing system deployment. No interfaces to external systems or system interfaces are well known (duplication of existing interfaces).
2. System implementation includes one or two major subsystems. May involve significant expansion of existing system. System interfaces are well known and based primarily on duplicating existing interfaces.
3. System implementation includes three or more major subsystems. System interfaces are largely well known but includes one or more interfaces to new and/or existing systems / databases.
4. System implementation includes three or more major subsystems. System requires two or more interfaces to new and/or existing internal/external systems and plans for interfaces to “future” systems.

Rationale:

**Answer Number: [ ]**

Which of the following best describes the need to account for ***Requirements Fluidity*** during development of this project?

1. System requirements are very well defined, understood, and unlikely to change over time (i.e. standard equipment)
2. System requirements are largely well defined and understood. Addition of new system functionality may require more attention to requirements management.
3. New system functionality includes a mix of well-defined, somewhat-defined, and fuzzy requirements. System implementation requires adherence to formal requirements management processes.
4. System requirements not well defined, understood, and very likely to change over time. Requires strict adherence to formal requirements management processes.

Rationale:

**Answer Number: [ ]**

Which of the following best describes the need to account for ***Technology Evolution*** during the expected life of this project?

1. Need to account for technology evolution perceived as minor. Example would be to deploy hardware and software that is entirely compatible with an existing COTS-based system. Ramifications of not paying particular attention to standards considered minor. System implemented expected to have moderate to long useful life.
2. Need to account for technology evolution perceived as an issue to address. Example includes desire for interoperable hardware from multiple vendors. Ramifications of not paying particular attention to standards may be an issue, as an agency may get locked into a proprietary solution. Field devices expected to have moderate to long useful life. Center hardware life expectancy is short to moderate. Control software is expected to have moderate to long life.
3. Need to account for technology evolution perceived as a significant issue. Examples might include implementation of software that can accommodate new hardware with minimal to no modification and interoperable hardware. Ramifications of not using standards based technology are considerable (costs for upgrades, new functions, etc.) Field devices expected to have moderate to long useful life. Center hardware life expectancy is short to moderate. Control software is expected to have an extendable useful life.
4. Need to account for technology evolution perceived as major issue. Examples include software that can easily accommodate new functionality and/or changes in hardware and hardware that can be easily expanded (e.g., add peripherals), maintained, and is interoperable. Ramifications of not using standards-based technology are considerable (costs for upgrades, new functions, etc.). Field devices expected to have moderate to long useful life. Center hardware life expectancy is short to moderate. Control software is expected to have an extendable useful life.

Rationale:

Which of the following best describes the potential impact of ***Institutional Issues*** on this project?

**Answer Number: [ ]**

Which of the following best describes the potential impact of **Institutional Issues** with ITS projects?

1. Minimal—Project implementation involves one agency and is typically internal to a particular department within the agency.
2. Minor—May involve coordination between two agencies. Formal agreements not necessarily required, but if so, agreements are already in place.
3. Significant—Involves coordination among multiple agencies and/or multiple departments within an agency or amongst agencies. Formal agreements for implementing project may be required.
4. Major—Involves coordination among multiple agencies, departments, and disciplines. Requires new formal agreements.

Rationale:

**Answer Number: [ ]**

Which of the following best describes the lead agency’s ***Experience and Resources*** with ITS projects?

1. Major—Lead agency has experience with the implementation and operation of large scale ITS projects. The agency has dedicated staff responsible for the design, implementation, operations and maintenance for ITS.
2. Significant—Lead agency has experience with the implementation and operation of large scale ITS projects. The agency has staff responsible for the design, implementation, operations and maintenance for ITS, but do not devote 100% of their time to that work.
3. Minor—Lead agency has experience with the implementation and operation of small scale ITS projects. The agency has staff responsible for the operations and maintenance for ITS, but do not devote 100% of their time to that work. This staff may or may not be involved in design and implementation.
4. Minimal—Lead agency has no experience with the implementation and operation of ITS projects or has been involved in small scale ITS project implementation. The agency has no staff responsible for the operations and maintenance for ITS or has staff that devote less than 25% of their time to that activity.

Rationale:

**Answer Number: [ ]**

**ITS Project Level Score (Answer Number Total): [ ]**

|  |  |  |  |
| --- | --- | --- | --- |
| **Risk Level** | **Low** | **Medium** | **High** |
| **ITS Project Level Score** | **7–10** | **11–18** | **19–28** |

\*This form is adapted from *NCHRP Report 560, Guide to Contracting ITS Projects*