

# Delaware 800MHz Emergency Communications System

## Next Generation



# Welcome!



# Delaware 800MHz Emergency Communications System

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## This Meeting:

### Goals:

- Kickoff Committee Participation in the 800MHz Program
- Bring members up to speed on current system status
- Establish plans and activities going forward, including requirements gathering



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## This Meeting:

### Agenda:

- Welcome  
Greg Patterson
- System History/Lessons Learned  
Colleen Gause
- Current System Status and Capabilities  
Robert Pedersen
- Roles of this Committee  
Bryant Baker,  
Robert Pedersen
- Project Management  
Lynn Hersey-Miller
- Summary and Next Meeting  
Greg Patterson



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## System History

### Original 800 MHz Digital Trunked Radio System:

- Contract signed with Motorola on Oct. 15, 1993 to design and build a state-of-the-art, digital trunked radio system;
- Provide statewide communications for all state, county and municipal government agencies, including fire and emergency medical services;
- System sub-divided into three geographic regions (three counties);
- 14 channels - NCC, 10 channels each – Kent, Sussex;
- Digital microwave (6 & 10 GHz) backbone;
- The statewide system was fully operational in the fall of 1998.



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## System History, cont.

- **Original System Configuration:**
  - 28 tower sites throughout the State;
  - Console, management system sites, Intellirepeater (IR) sites for improved coverage in selected areas;
  - FCC Region 28 compliant to provide minimum of 95% area reliable;
  - Provides radio communications for over 10,000 State, non-state agency users
- **System Enhancement – May 2002:**
  - New site for Rehoboth/Lewes area to replace IR site;
  - New site for DEMA location for Kent County;
  - New site for Claymont, replacing the BDA on the I-495 corridor;
  - Microwave upgrade added to the IR site in the Hartly area;
  - System enhancement improved area reliability to 98% in-street.



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## System History – Lessons Learned

### ■ Tower Site Locations:

- More cognizant of Constituent concerns;
- Avoid heavily populated/residential areas;
- Consider antenna location on existing sites whenever possible.

### ■ System Implementation:

- Set realistic timeframes;
- Manage stakeholder expectations;
- Keep the stakeholders informed with clear, consistent communications;
- End-user and Constituent concurrence.



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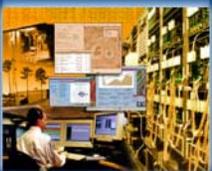
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## Current System Status

### Coverage

- Current State of Delaware (SOD) infrastructure provides reliable communications statewide
  - Coverage greater than 98% in-street with portable
  - Some in-building coverage
- Operational Concern
  - Insufficient in-building coverage



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## Current System Status

### Dispatch Consoles

- Current SOD infrastructure provides:
  - Primary dispatch centers with full statewide capabilities
  - Secondary dispatch centers with limited capabilities
- Operational and Maintenance Concerns
  - Secondary centers, especially “fall-backs”, need full capabilities
  - Can’t add additional consoles
  - Lifecycle support for current consoles ending



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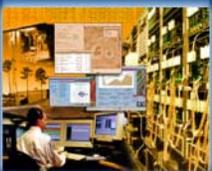
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## Current System Status

### Computer Platform

- Current SOD computer network controls all radio functions
- Maintenance Concerns:
  - Does not support new software releases to enhance system reliability
  - Lifecycle support for 10 year old computers and software ending



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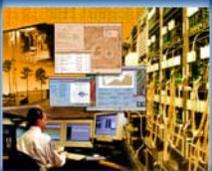
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## Current System Status

### Interstate Interoperability

- Current SOD infrastructure enables:
  - Users from some surrounding states to operate on SOD system
  - SOD to operate in some surrounding states using their systems
- Operational concerns:
  - Can't communicate with users in all surrounding jurisdictions
  - While in other states can't hear what is happening in SOD



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## Current System Status

### Intrastate Interoperability

- Current SOD infrastructure provides:
  - Users with full intrastate interoperability;
  - Limited interoperability with City of Wilmington users; State enhanced City system providing limited capability.
- Operational and maintenance concerns:
  - Users need full operability;
  - City system age, type prohibits full capabilities.



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## Roles of this Committee

### Mission:

This Committee will:

- fully represent the System Users, present and future, in specifying System Requirements;
- issue a Report to the Governor's Office recommending the Program Strategic Direction;
- resolve conflicts within project task and specifications priorities.



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## Roles of this Committee

### Focus on Requirements:

- Establish the System Specification;
- To do this, the Program Team needs:
  - To determine what are the operational, functional requirements for this System
  - Your users' lists of requirements by the next meeting. Email your users' requirements to the Technical Team Leader, [Richard.Reynolds@state.de.us](mailto:Richard.Reynolds@state.de.us).



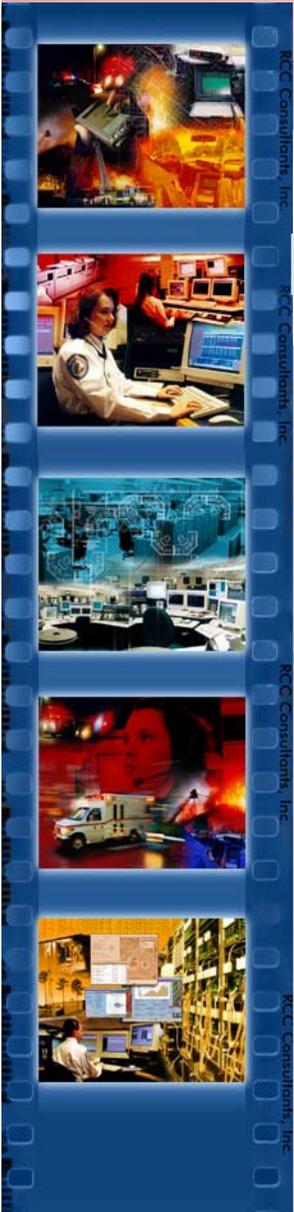
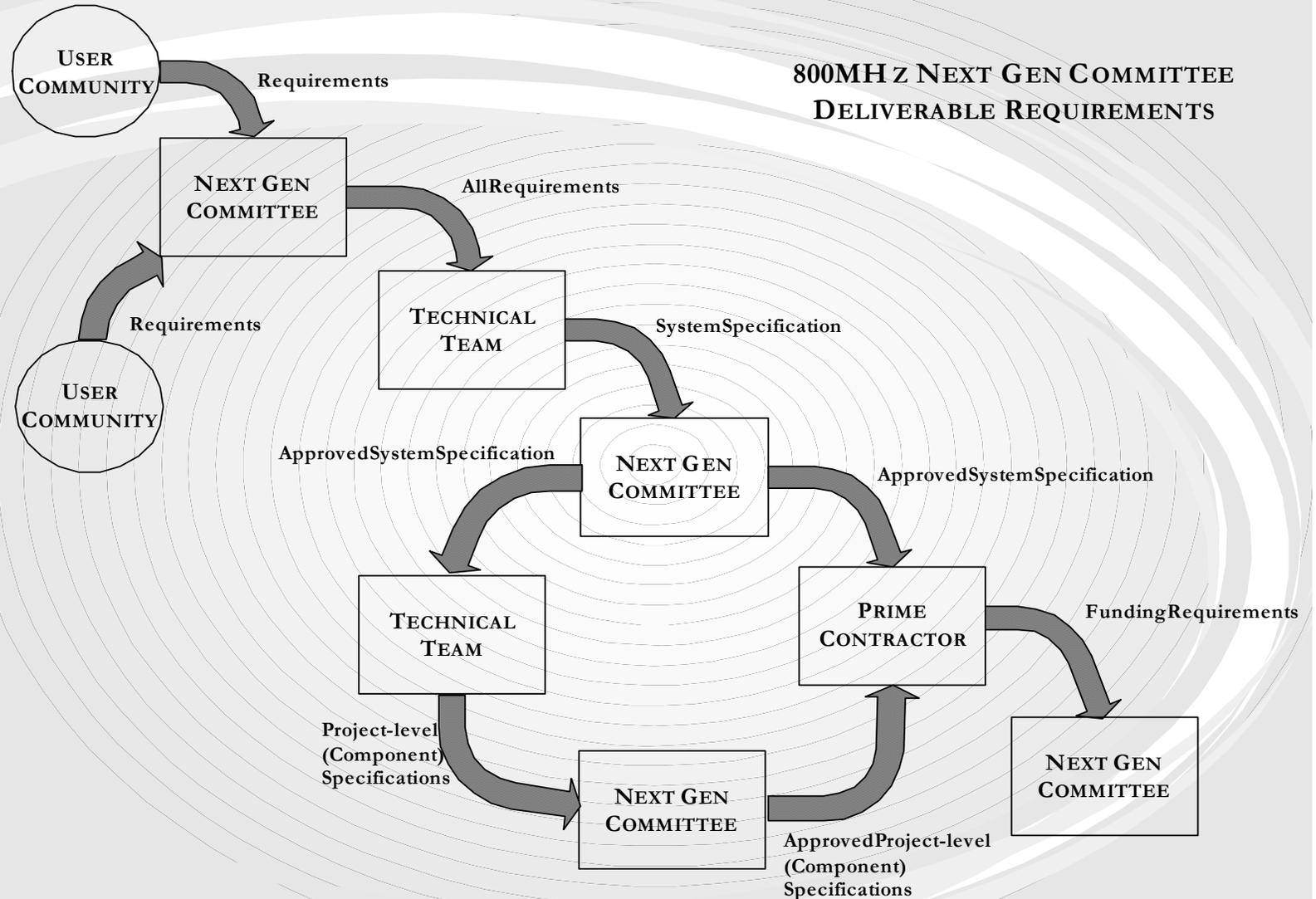
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## Roles of this Committee



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## Roles of this Committee

### Our Path Going Forward - Specifications

- Generated from your Requirements;
- Technical Team will convert the Requirements into Specifications to obtain accurate cost estimates, test requirements;
- System specification will be further broken down into component specifications.



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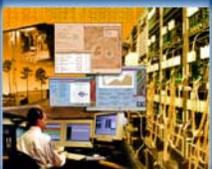
## Roles of this Committee

### Our Path Going Forward – Requirements Considerations

#### Coverage

Need input to ensure specifications meet your users' expectations:

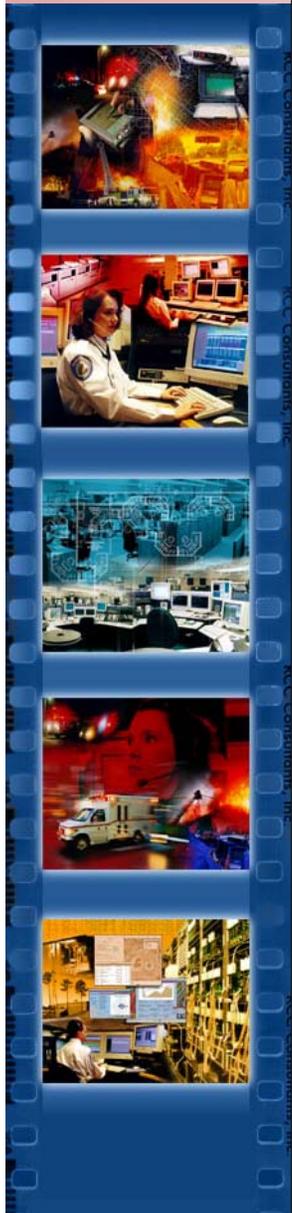
- Determine coverage in Delaware
  - Primary Goal – 100% of buildings in SOD
  - Alternate Goal – Some percentage of all critical buildings or other
- Determine coverage within each building



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- Major Employers**  
• Point
- Nursing Homes**  
x Point
- Schools**  
• Point
- Day care centers with capacity >15 children**  
o Point
- Government Facilities**  
• Point
- Dispatch Centers (Fire/Police)**  
x Point
- Fire Stations**  
• Point
- Police Stations**  
• Point
- Colleges/Universities**  
• Point
- Public Shelters (HVS)**  
• Point
- Medical facilities in hurricane inundation areas (HVS)**  
• Point
- Hotels/Motels with rooms > 40**  
• Point
- Prisons/Jails/Detention Centers**  
• Point
- Military Facilities**  
• Point
- Hospitals**  
H Point
- Emergency Operation Centers**  
• Point
- Catastrophic Hazardous Material Sites**  
• Point
- Ambulance Services**  
• Point
- Microwave Towers**  
• Point
- Radio Transmitter Towers**  
• Point
- Ports**  
• Point
- FIRE DISTRICT**  
□ Region



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## Roles of this Committee

### Our Path Going Forward – Requirements Considerations

#### Coverage

- Determine coverage within each building, cont.:
  - Primary goal – 100% of all areas inside buildings
  - Secondary goal – Some percentage or critical areas or other
  - Examples of Challenges:

Elevators	Basements	Tunnels
Bank Vaults	Jails	X-Ray Rooms



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## Roles of this Committee

Our Path Going Forward –  
Requirements Considerations,  
cont.

### Dispatch Consoles

Need input to ensure specifications  
meet your users' expectations:

- Identification of fall-back centers
- Identification of additional consoles needed



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## Roles of this Committee

Our Path Going Forward –  
Requirements Considerations,  
cont.

### Interstate Interoperability

Need input to ensure specifications  
meet your users' expectations:

- Identification of 911 centers in surrounding jurisdictions
- Identification of other interstate needs



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## Roles of this Committee

Our Path Going Forward –  
Requirements Considerations,  
cont.

### Interstate Interoperability

Need input from users of both systems:

- Upgrade or replace city systems...
- Add city users to SOD system...



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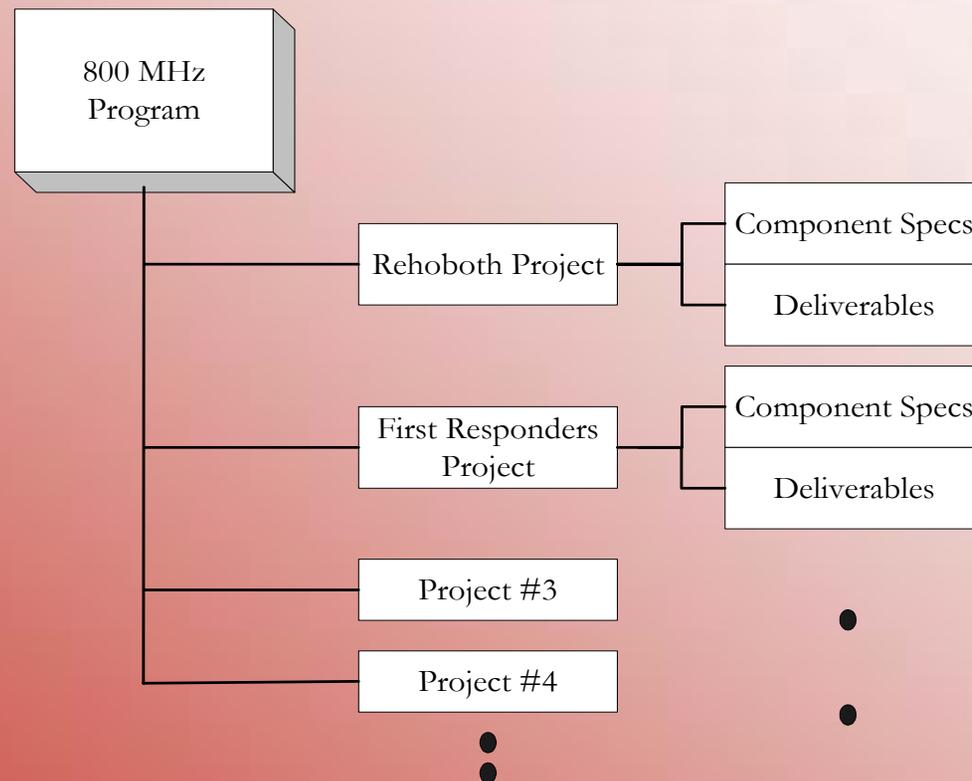
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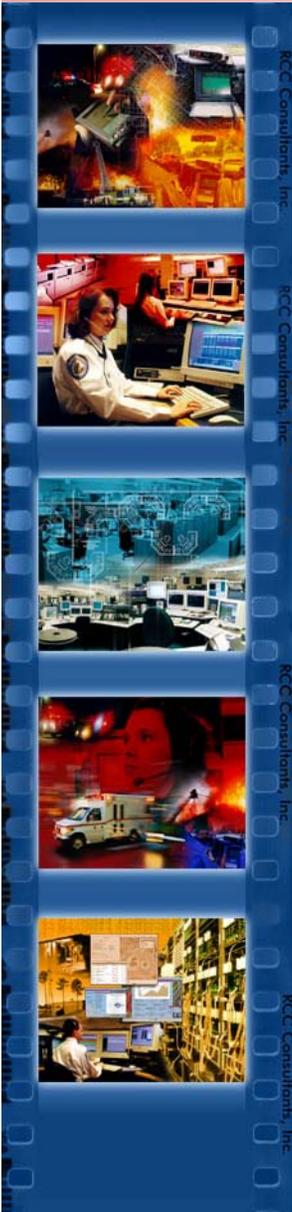


## Project Management

### Program Structure



**A project is part of the 800MHz Program if its scope results in additional usage of the 800MHz system.**

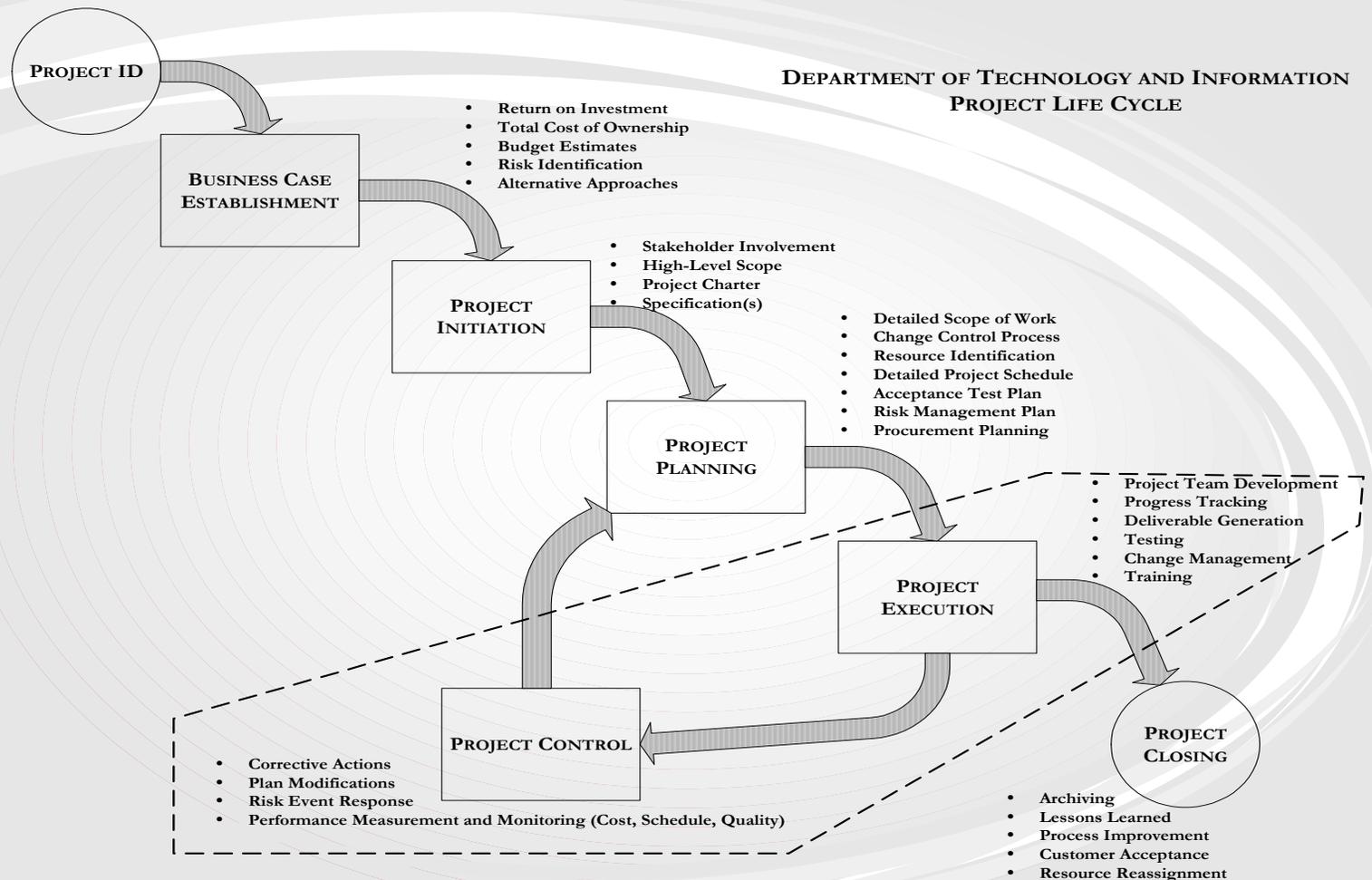
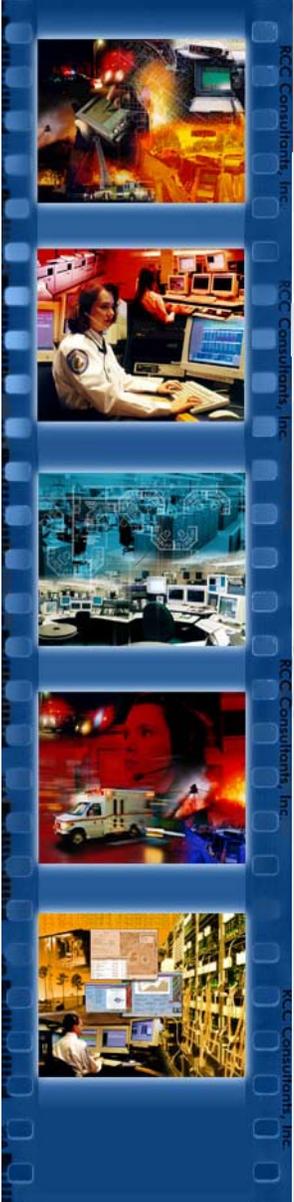


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# Project Management Methodology



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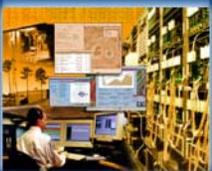
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## Project Management Roles

### State Agencies

- **Division of Communications**
  - Technical Team Members
  - NextGen full committee members
  - Project Management Team Members
- **Governor's Office**
  - NextGen full committee members
  - Funding Allocation Sponsors
- **Department of Technology and Information**
  - Project Management
  - Technical Team Members
  - NextGen full committee members



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## Project Management

### Consultants Roles:

- Technical Team Members
- Project Management Team Members



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## Summary

**Next Meeting: Thursday, November 20, 2003.  
Time/Place to be announced. Thank you!**

