

Implementation of an Early Warning System

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Background

- >200,000 in-hospital cardiac arrest each year
- Clinical deterioration is often undetected or ignored
- Early Warning Systems have been shown to identify patients at risk up to 20 hours before a significant event
- Early identification decreases deaths (2.5 – 30%) and transfer to higher levels of care (11 – 46%)

Purpose Statement

- Develop a plan and implement an Early Warning System on medical/surgical units
- Assess effectiveness:
 - Mortality rate
 - Cardiac arrests
 - Transfers to higher levels of care

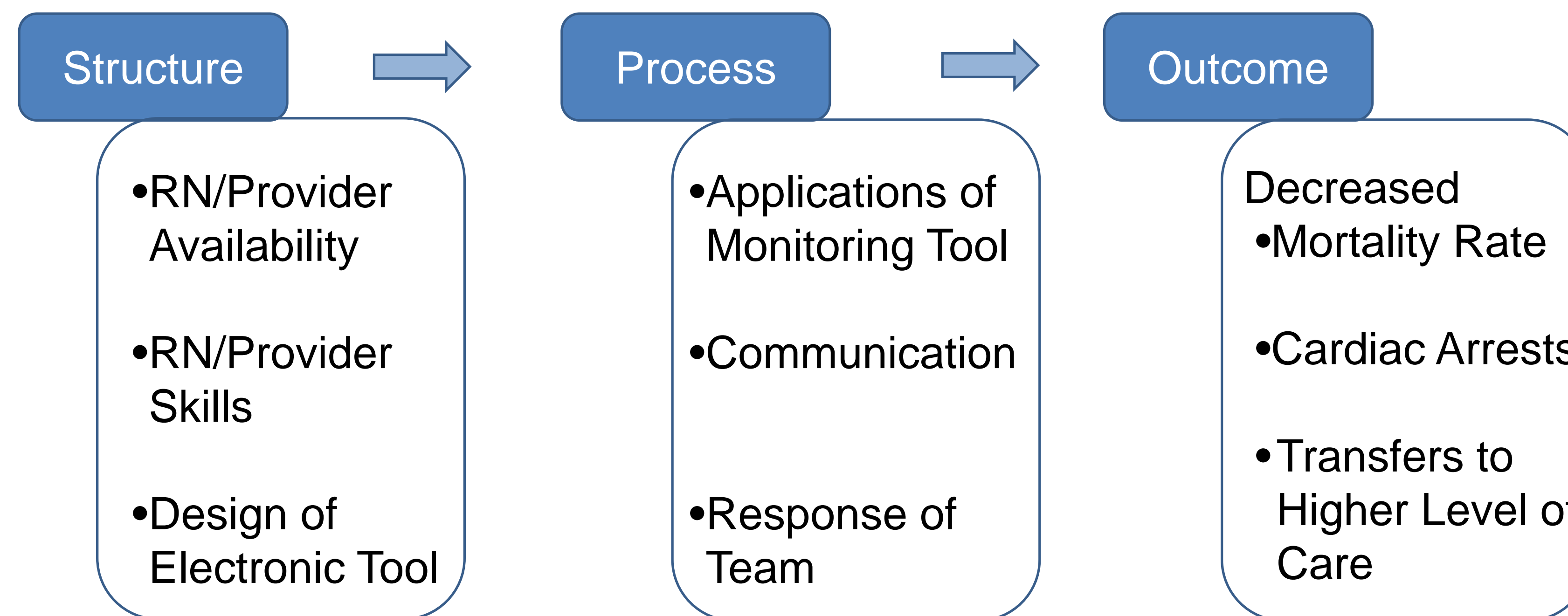
Methods

- Literature review to define data and training needs
- NEWS2 kick-off meeting
- Clinicians reviewed design
- Feedback provided to the build team
- *Implementation Playbook* developed for users/leaders
- Baseline data reviewed

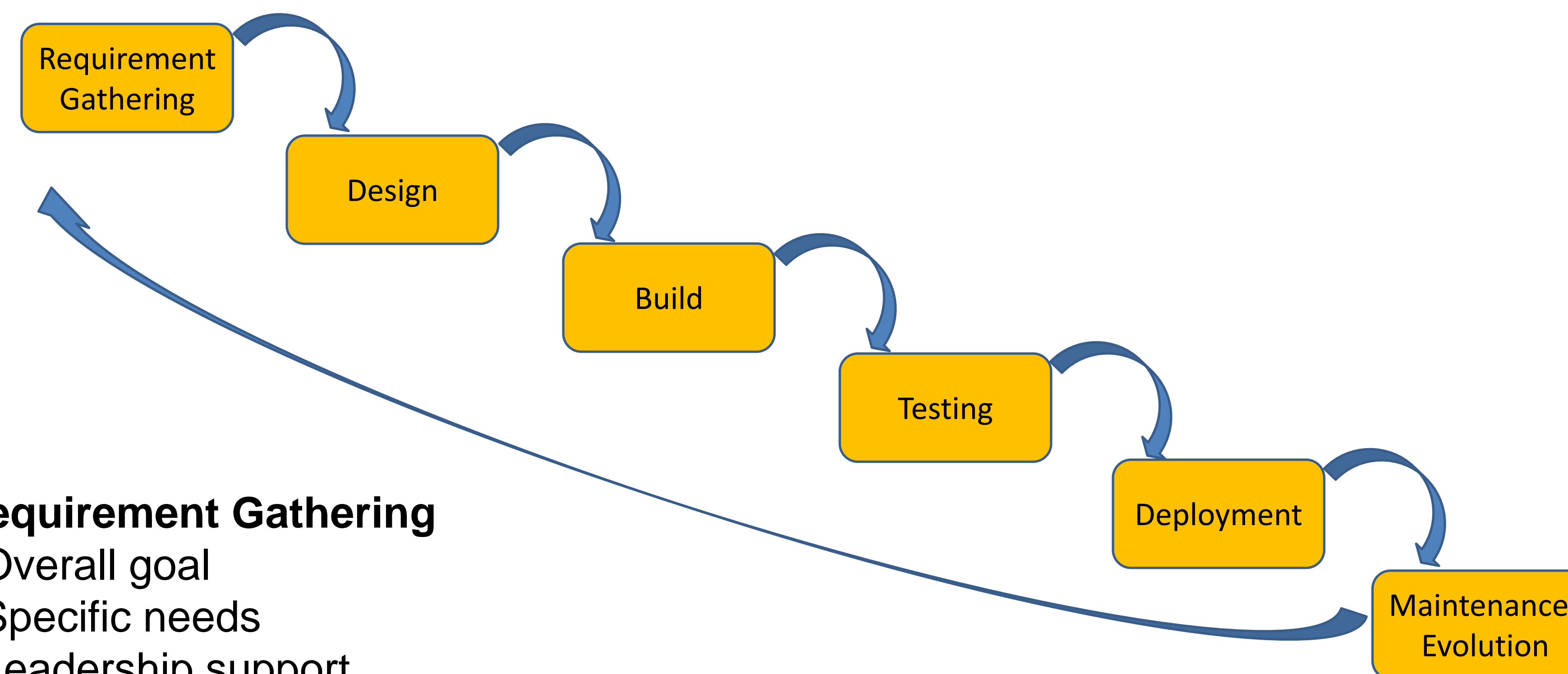
Setting

- 207 - bed medical center
- Southern California health system
- 132 med/surg beds
- No out-of-staffing Rapid Response Team

Donabedian's Framework



Royce's System Development Lifecycle



Requirement Gathering

- Overall goal
- Specific needs
- Leadership support
- Define scope
- Available resources

Design

- Existing tool available
- Include clinicians
- Active/passive notification
- Expected response
- Document workflows
- Create plan

Build

- Monitor progress
- Escalate to clinicians for questions
- Create training plans
 - RRT
 - General floor staff
 - Hospitalists

Testing

- Technical team
- User acceptance

Deployment

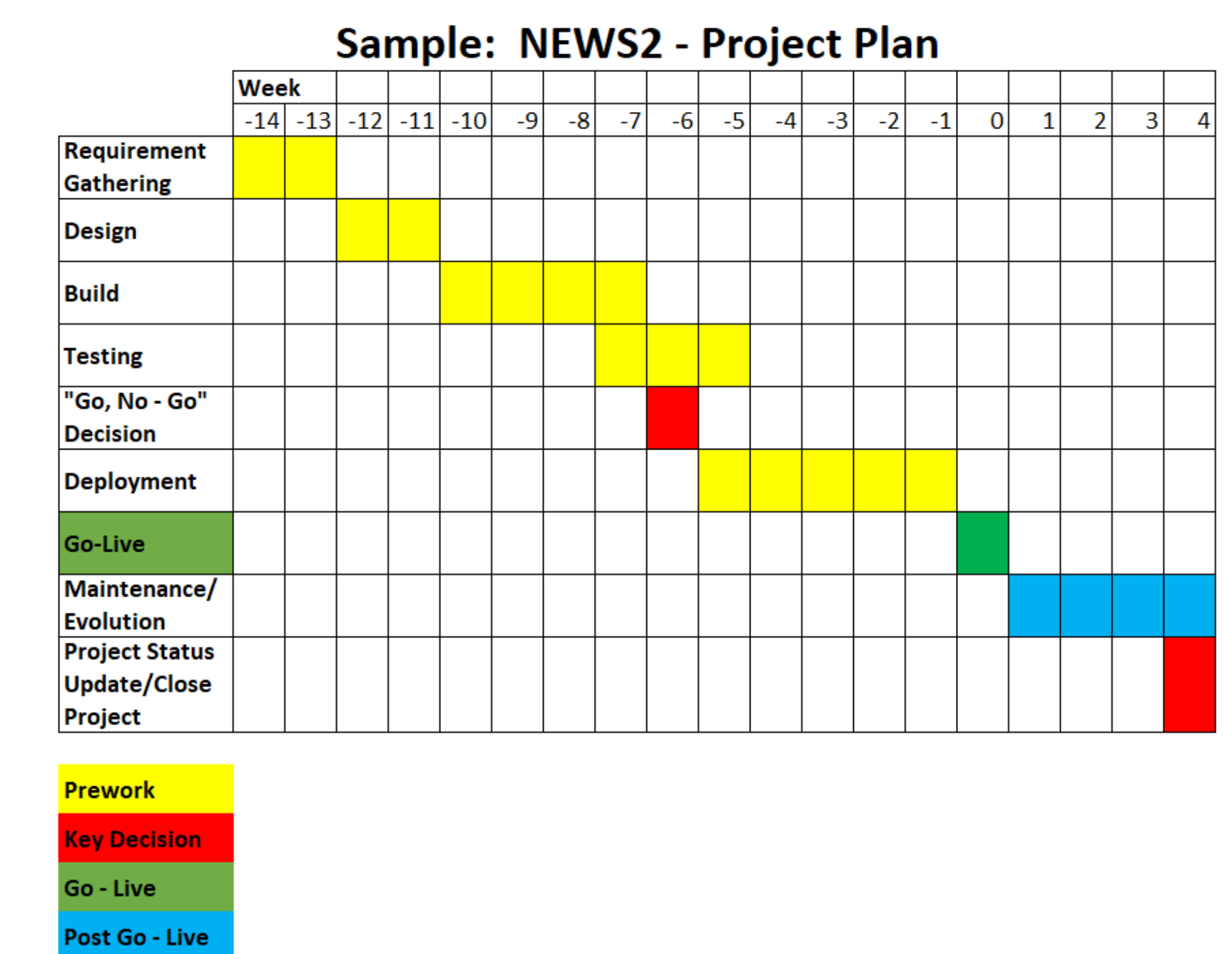
- Internal marketing
- Provide training
- Go-live support
 - At-elbow
 - Superusers
 - Monitor process measures

Maintenance/Evolution

- Address any breaks
- Monitor outcomes
- As needs change, start back at the requirement gathering step

Implementation Plan

14 Weeks Pre- and 4 Weeks Post - Implementation



Evaluation Plan

- Potential measures
 - Mortality rates
 - Cardiac arrests
 - Transfers to higher level of care
 - Length of stay
 - Rapid Response Team use
- 90 day post go – live and ongoing

Challenges/Outcome

- This implementation was aborted due to a system leadership decision.
- Failed IT implementation occurs in 40% of projects and is costly.
- Prevention of failed IT projects requires a sound basis for system selection.

Resources

Implementation Playbook and references



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