



**Making It Stick:  
CIS Implementation & Maintenance**

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### Today's Learning Outcomes

- Describe system development life cycle phases, including the critical links to people, process & technology.
- Apply key success factors for on-going CIS optimization in support of organizational transformation.
- Define opportunities for the nursing informatician to bring value to CIS implementation & maintenance & “make it stick”.

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### Getting to Know You

- Professional role
- Current work setting
- Informatics background & experience
- Challenges with “Making It Stick”

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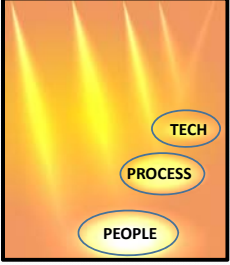
### Why we do this work . . .



**. . . And need to do it well!**

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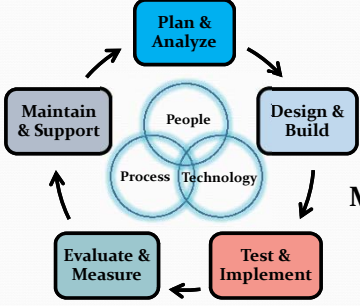
## Spotlighting: System Life Cycle



- SLC: The period of time that starts when a software product is conceived & ends when the product is no longer available for use
- SDLC: Standardized method to develop & implement information technology
- Phased approach – each phase has roles, goals & tools
- Focus on people, process & technology

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## System Life Cycle Phases




**Multiple SLC Models**

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## Plan & Analyze

- Clarify the problem to be solved
- Strategic fit
- Build consensus
- Committed sponsor
- Key stakeholders
- Teams & SMEs
- Change readiness context
- Resource requirements
- Outcome measures



*We view what is needed – & will be used – through multiple lenses*

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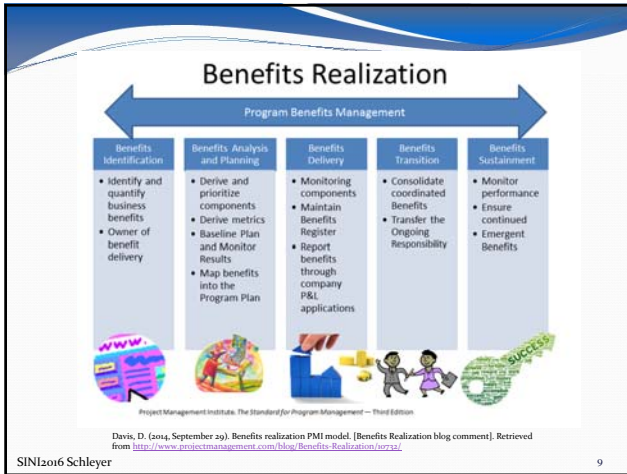
## Simultaneous & Synchronized Planning

- Communication
- Change
- Benefits realization
- Training
- Risk




*We continuously assess & address the people-centered impacts*

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## Plan & Analyze

- Project scope, charter & plan
- Feasibility study
- Functional requirements
- RFI/RFP
- Best fit option
- 'As is' and 'to be' workflows & data flows; use case diagrams
- Go-live approach decision




***We carefully balance desired functionality & affordability***

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## Design & Build

- Translate requirements into software
  - Develop
  - Configure
- Human-technology interaction
- Focus on future state
- Include the people impacted!
- Remember the infrastructure
- Leverage & expand multiple plans




***We transform the concept of what is needed into useful & usable reality***

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## Test & Implement

- Multi-level testing
  - Remember user acceptance testing
  - Dress rehearsals
- Role-based training
  - Focus on core workflows
  - 70-20-10 Model
  - Learner accountability




***We create expectations & develop methods & tools for on-going learning***

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## Test & Implement

**Go-live = THE BEGINNING**

- Lifestyle change
- Growth & development
- Super-user role
- Customer pain management




*We step into the change together & celebrate Go-Live success!*

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## Evaluate & Measure

- Implementation process
- System effectiveness
- Customer happiness
- System-related outcomes/ Value realization
- Unintended consequences
- Is it obsolete yet?



*We keep monitoring & measuring over time as benefits & impacts emerge*

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## Support, Maintain & Optimize




- Keep the lights on & people working
- Plan & practice for unexpected downtimes
- Create a team of inter-professional informatics support roles & services
- Keep asking & listening

*We continuously educate & reinforce behavior change to accelerate adoption*

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## Support, Maintain & Optimize



*We recognize - & manage - great ideas & troublesome problems as they pop up*

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Drayton, A. (2014). This is Whackamole. [gif]. Retrieved from <https://external-wiki.terc.edu/display/Innovate/Team+Whack-a-mole>

### CHIME Member Survey: Realizing Value

*Optimization = outcomes-based improvement to meet a defined set of objectives*

"Over the next 12 months, the top IT priority for my organization is projects that help us get more value out of our EHR investment." (n=42)

Response	Percentage
Strongly agree	35.7%
Agree	35.7%
<b>Net agree</b>	<b>71%</b>
Neither agree nor disagree	11.9%
Disagree	11.9%
Strongly disagree	4.8%
<b>Net disagree</b>	<b>17%</b>

Impact Advisors, LLC (2015, August).

**We link vision to operations & lead toward optimization**

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### Support, Maintain & Optimize

*Are we working on the right problem?*

- Intake & prioritization
  - Fix, Enhance or Optimize
  - Objective ranking
  - Benefits
  - Feasibility
  - Alignment

**We engage clinical, operational & informatics decision-makers in governance**

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### Support, Maintain & Optimize

*Do we have the right solution?*

- Execution & adoption
  - Design based on principles
  - Leverage scarce resources
  - Release predictably
  - Communicate exquisitely
  - Engage informatics support community

**We hone our clinical-technical communication skills - & teach others the same**

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### Does Optimized = Safe?

- Safety
- Assurance
- Factors for
- EHR
- Resilience
- Use health IT to make care safer
- Continuously improve safety of health IT

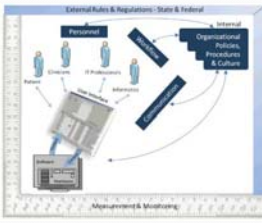
**We join interprofessional colleagues in applying evidence for EHR safety**

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## Factors Impacting HIT Life Cycle

Sittig & Singh Socio-Technical Model

- Hardware & software computing infrastructure
- Clinical content
- Human computer interface
- People
- Workflow & Communication
- Internal organizational policies procedures & culture
- External rules, regulations & pressures
- System measurement & monitoring



Sittig & Singh 2010

**We study & improve multiple dimensions of safe & effective HIT use**

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## The SDLC Continues

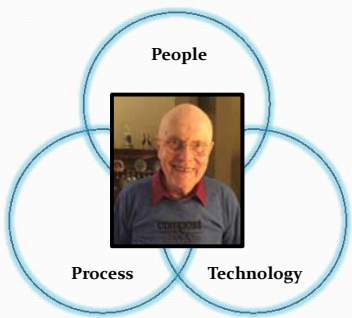
- Healthcare information technologies continue to be developed & implemented . . .
- Affecting our lives daily
- Nurses can shape healthcare IT impacts through the SDLC & focus on safety & safe use



**We lead informatics to support health & care for people everywhere!**

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## Thanks!



People

Process

Technology

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## Questions?



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