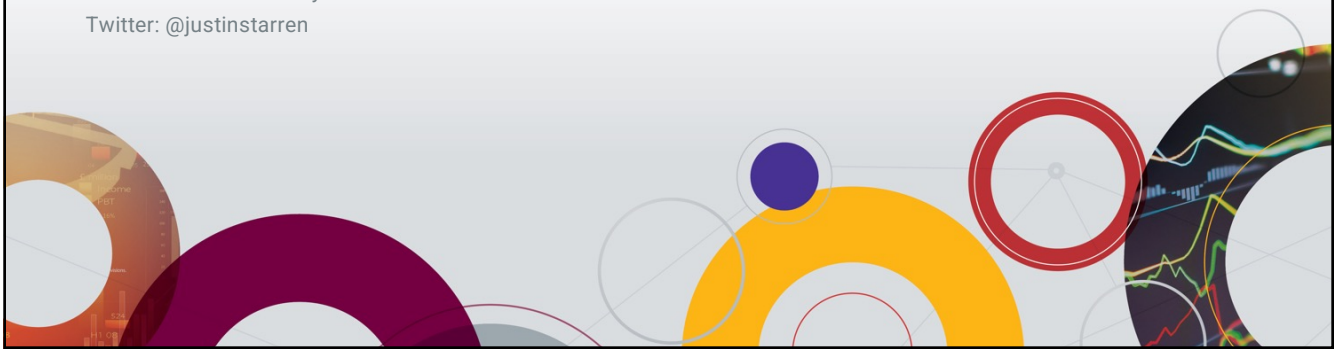
Introduction to maturity models

Justin Starren
Northwestern University
Twitter: @justinstarren



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Disclosures

I have no relevant relationships with commercial interests to disclose.

I "stole" these slides from Adam and Boyd (except for the bad jokes).

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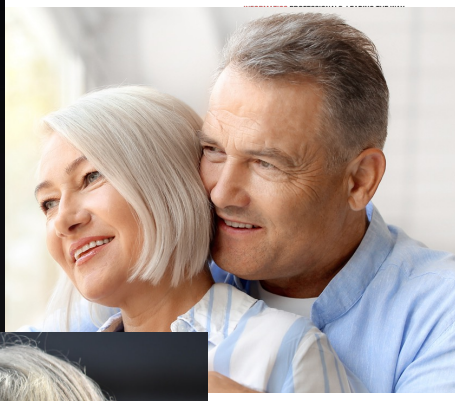
Maturity Models not Mature Models



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Where are we? Where are we going?

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Maturity models

- Framework to assess and guide planning
- "Maturity" refers to the degree of formality and optimization of processes and capabilities.
- Developed in 70's for manufacturing
- Capability maturity models for software engineering developed in 90's

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Three examples

- Quality Management Maturity Grid
- Grid-based maturity model
- Orgs evolve through levels of maturity

HIMSS

- HIMSS EMRAM
- Specific capabilities tied to maturity
- Broad adoption
- Ongoing development of new tools

EDUCAUSE

- EDUCAUSE maturity indexes
- Specific categories with maturity anchor statements
- Likert-scale questionnaire
- Part of core data service

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Maturity .vs. Deployment/Adoption indexes

- **Maturity Index**
  - Related to standardizing and optimizing **processes** and functions
  - Related to technology adoption, but not technology centric, per se
  - Measures organizational capacity to deliver a service.
- **Deployment/Adoption Index**
  - Related to optimizing technology adoption and use for particular outcomes
  - Focused on technological **capabilities**, infrastructure supported by organizational processes
  - Measures the degree to which an an institution has deployed technologies related to delivering a service.

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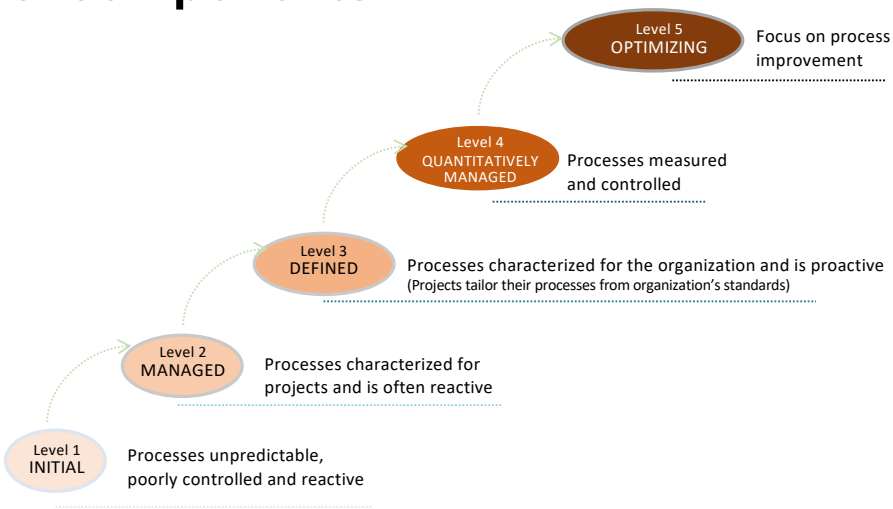
Maturity model components

- Levels ~(3-7)
- Maturity labels
- Level characteristics
- Categories
- Ratings:
  - Activities at each level
  - Anchor statements
  - Likert scales



https://en.wikipedia.org/wiki/Capability_Maturity_Model_Integration

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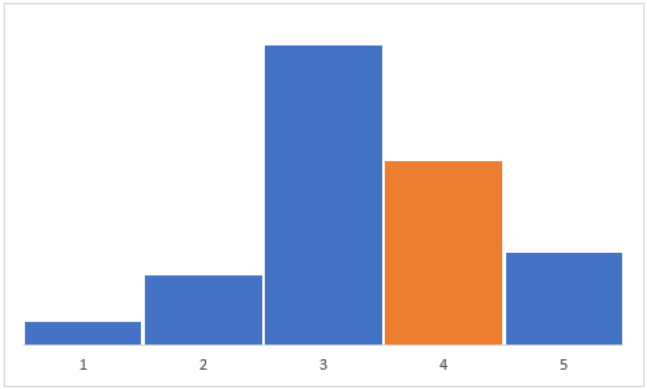
Anchor Statements

10: Choose the statement that best describes your institution's research computing capabilities:

1. High performance computing (HPC) resources exist at our institution, but they are not not broadly available or centrally supported.
2. We have centrally supported HPC resources that investigators know how to access, but our capacity is limited and there are no clear expansion plans.
3. We have supercomputing capabilities that are being used in bioinformatics, genomics, or other areas related to research informatics.
4. **Our institution has made strategic investments in research computing. Thus, our capabilities are robust and broadly available, but we are facing demand issues.**
5. Our research computing capabilities are robust and well defined, covering broad areas of application. We have processes in place to evaluate and grow our capacity.



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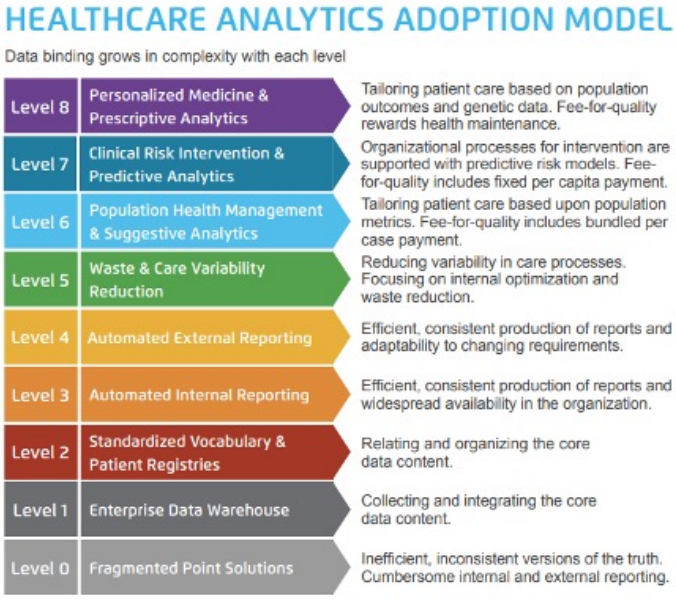
Analytics Adoption Example



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Research Maturity Index Categories

- Policies
- Leadership
- Governance
- Supportive Culture
- Institutional Priority
- Integration
- Dedicated Infrastructure
- Sustainability

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Why Bother?

- Within the institution
  - Enhanced Organizational Learning
- Benchmarking
- Prioritization & Planning
- Money
- Developing new models

Bititci US, Garengo P, Ates A, Nudurupati SS. Value of maturity models in performance measurement. Int J Prod Res. 2015;53: 3062–3085.

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Thank you!
Justin.starren@northwestern.edu

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