Statistical Programming Compliance – Why do we Continue to Struggle

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Background

- Background on Merck Global Scientific Programming Group:
  - Support Analysis and Reporting of Clinical and Observational Trials
  - Phase I-IV
  - Multiple therapeutic areas
  - Global organization
  - Outsourcing

- Scope: this talk will focus on
  - regulatory reporting where the Clinical Study Report is the main deliverable
  - our experience and struggles with compliance
  - some designs to enhance compliance

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What is Compliance ?

- Compliance is a state of being in accordance with established guidelines, policies and procedures.
  - Regulatory Agencies, Corporate Policies, HIPPA …
- FDA definition of Validation: Establishing documented evidence which provides a high degree of assurance that a specific process will consistently produce a product meeting its predetermined specifications and quality attributes.
- Scope of Compliance includes –
  - Training
  - Process (SOPs & processes)
  - Access control (System Access Reviews)

Why Statistical Programmers Need To Be Compliant

- Meets Regulations
  - Regulatory Requirements for computer validation
    - ICH Good Clinical Practices (GCPs) and 21 CFR Part 11
      - Programming must follow a Software Design Life Cycle (SDLC)
      - Audit trails, validated program code required
  - Company policies
- Builds in quality
  - Processes are built on SDLC methodology
    - Better to invest time in defining requirements than fixing issues later
- Increases Productivity
  - Allows for flexible resourcing across the organization
    - Global regions
    - Partnerships
  - Supports full life-cycle of the work

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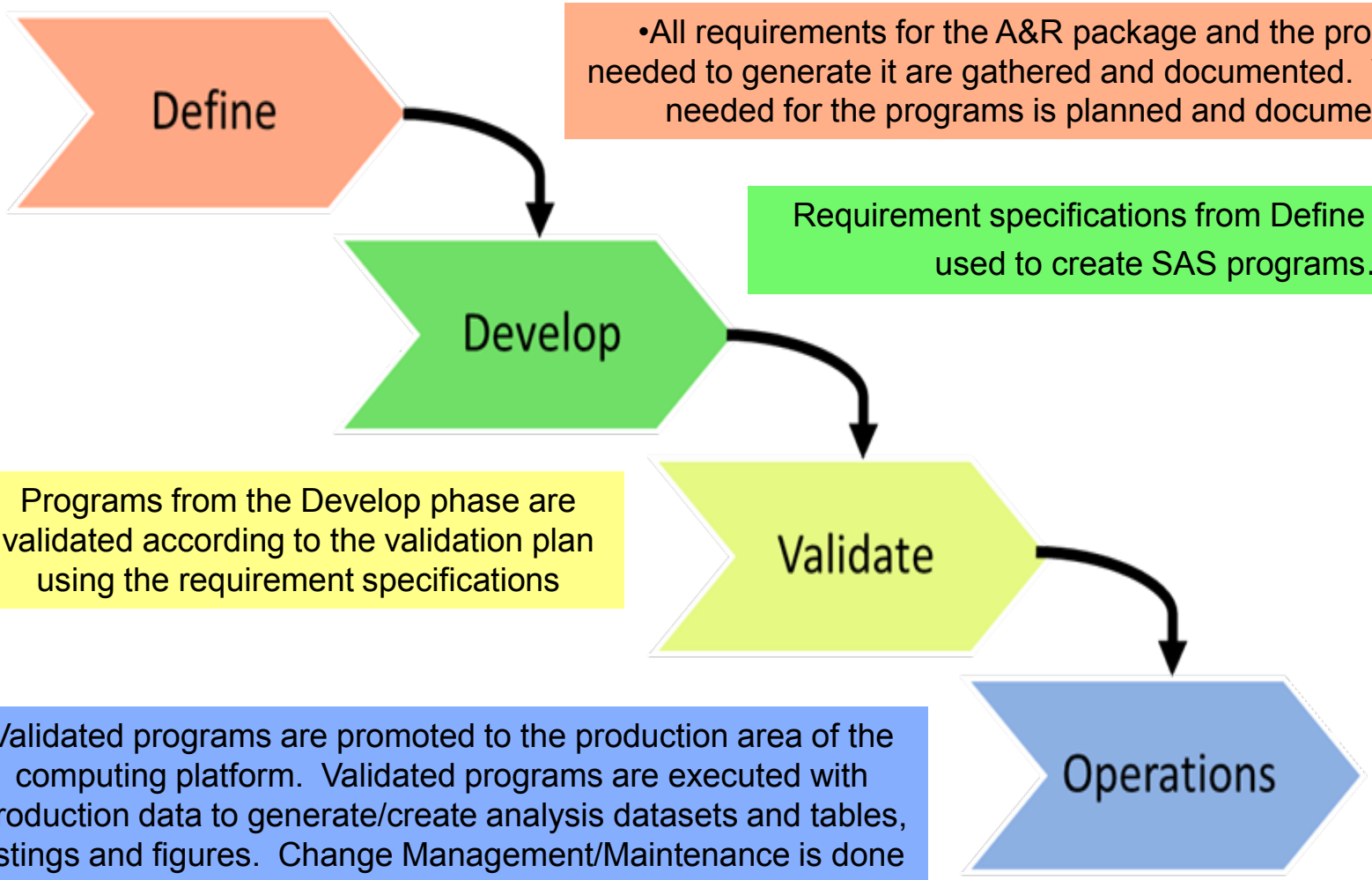
System Development Life Cycle (SDLC) Waterfall Model



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Why we Struggle - Challenges Encountered

- Global workforce with outsourcing
- Less experienced workforce
- Merger resulted in many legacy processes & systems

Process Scope	# SOPs	# GSP processes	# supporting documents
Current	2	6	90
Legacy1	8	10	125
Legacy 2	4		32
Legacy 3	5		4

- "We didn't know the process."
- "We didn't have time to comply. We needed to meet the filing deadline."
- Staff does not perceive compliance activities as value added (paperwork/red-tape)
- Current compliance process is manual
- We expect departmental compliance, but without monitoring and enforcement, expectation is not always met
- Post-study compliance reviews and retroactive remediation inefficient – resource intensive after the fact.

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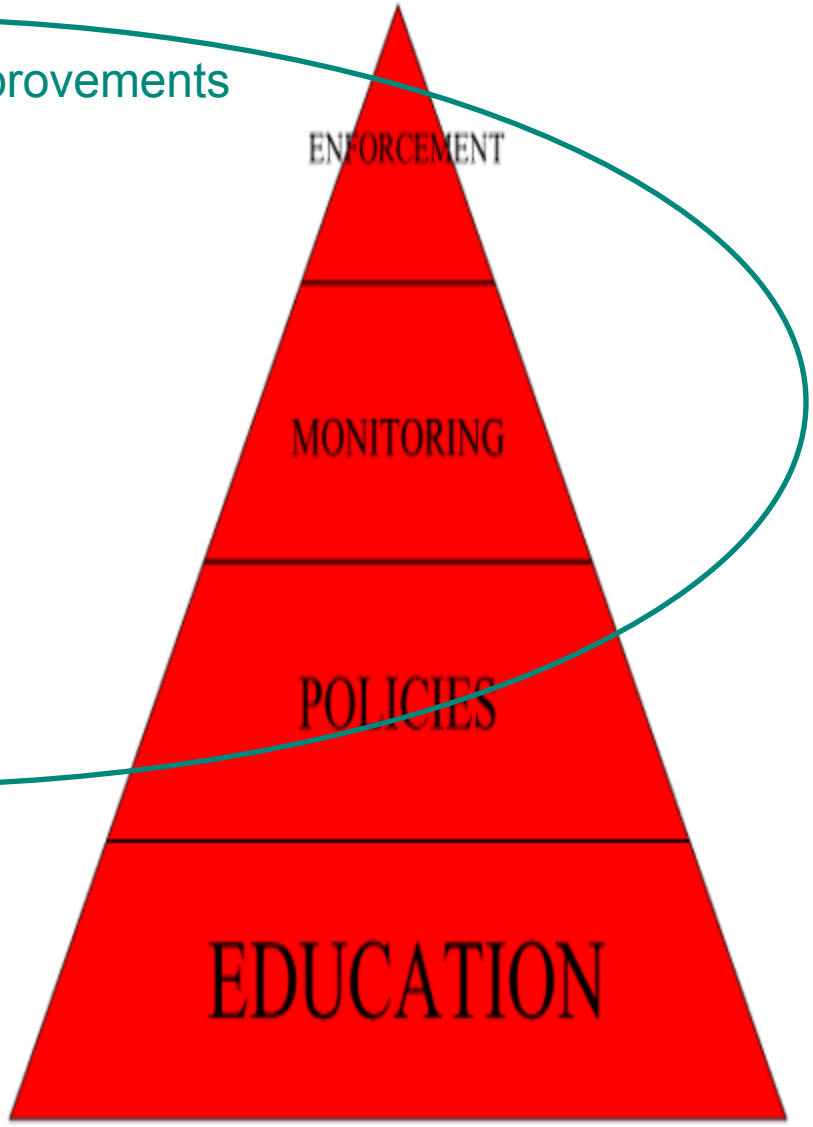
Approach to Ensuring Departmental Compliance

Currently Targeting Improvements

- Post-study compliance reviews and retroactive remediation
- Regular system access reviews

- Standardized Computing Platform (UNIX)
  - *Data Security: Data is traceable from source database to analysis platform with audit trail*
- Continuously seek opportunities to simplify processes
- Streamlined, consistent SOPs for current process

- Website (GSP Navigator)
- Education on importance and expectations
- SOP training in E-Learning



Pyramid of Compliance, posted by John P Mello Jr., www.threemail.com/2010/06/five-ways-to-focus-your-workers-on-compliance/

Toolbox *(Increased Policies)*

- Tools to automate creation of validation documentation during development
- Designed to work in the current computing platform using a standard directory structure and naming conventions
- Functionality
  - Create a validation environment and open testing checklists in the computing platform folder
  - Create / update standard program/macro header for each new program
    - Pre-fill header for programmer (Program name, Author, Date…)
  - Promote a validated program to production environment
  - Provide transaction log of actions taken on a given program
- Expectation – all staff required to use the toolbox

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Automated Compliance Assessment
(Increased Monitoring & Enforcement)

- Tool to measure compliance (SOPs, use of standards and required training)

- Study Level
  - Automated tool (SAS macro) searches our computing platform for evidence of compliance with SOPs
    - Requires a standard directory structure and naming conventions
    - Searches for existence of specific documentation
      - Checklists, specifications, testing status, evidence of approval
    - Run during development and just prior to CSR publishing

- Department Level Dashboard (to review compliance metrics)
  - Establishing quarterly reviews by management
    - Process: (SAS macro) review % compliance of current projects
    - Training: Report out of our company E-Learning System

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Expected Outcomes

- Individuals can better understand the expected deliverables *(Increased Education)*
- Teams can proactively identify and remediate compliance issues *(Improved Monitoring)*
- Management can see compliance metrics *(Improved Monitoring & Enforcement)*
  - Assess and set expectations
  - Identify common areas of compliance gaps
  - Improve processes
  - Senior management sponsorship

- Improved Compliance
  - Improved quality
  - Higher productivity
  - Reduced regulatory risk
  - Increased company success

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