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Measuring Information Security and FISMA Compliance

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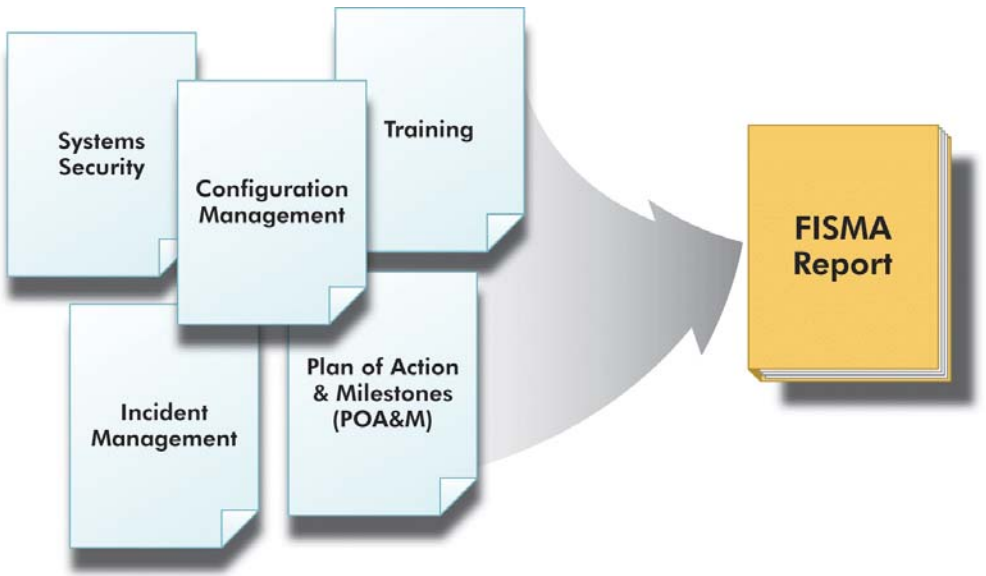
While current FISMA metrics measure some key IT security components, they do not accurately reflect an Agency's comprehensive IT security posture

- Progress and the overall state of security should be estimated to mitigate vulnerabilities
- Resources should be devoted to standardize Inspector General evaluation methodologies
- Agencies should be required to report against performance metrics on a quarterly/annual basis to monitor progress
- Agency data should be used to populate standard dashboard templates for federal trending and distribution



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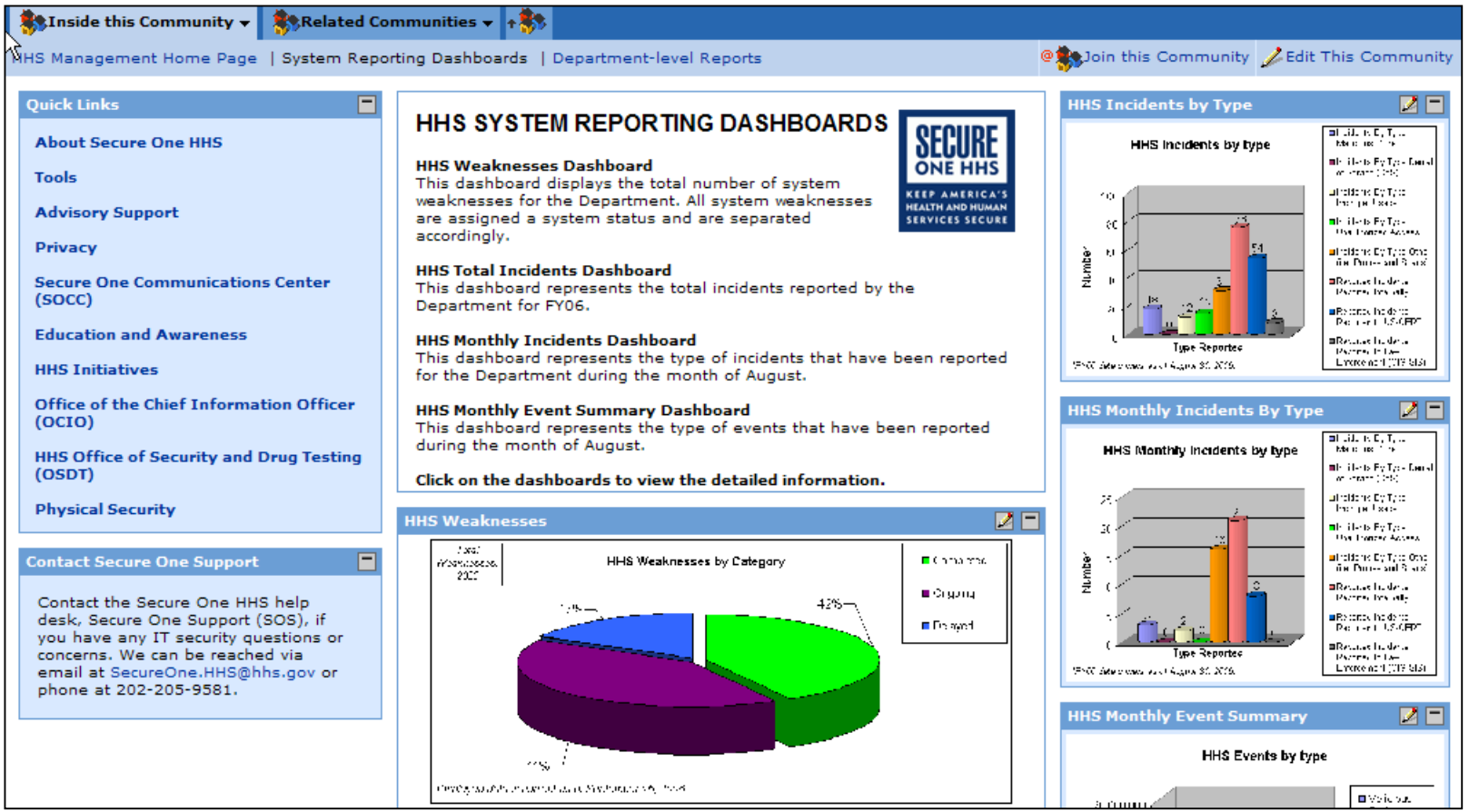
FISMA metrics must support the integration of IT security into all Agency business processes

- Provide information security protections commensurate with the risk and magnitude of potential harm
- Ensure information security management processes are integrated with agency strategic and operation planning processes
- Implement policies and procedures to cost-effectively reduce risks to an acceptable level
- Periodically test and evaluate information security controls and techniques
- Report annually on the adequacy and effectiveness of information security policies, procedures, and practices

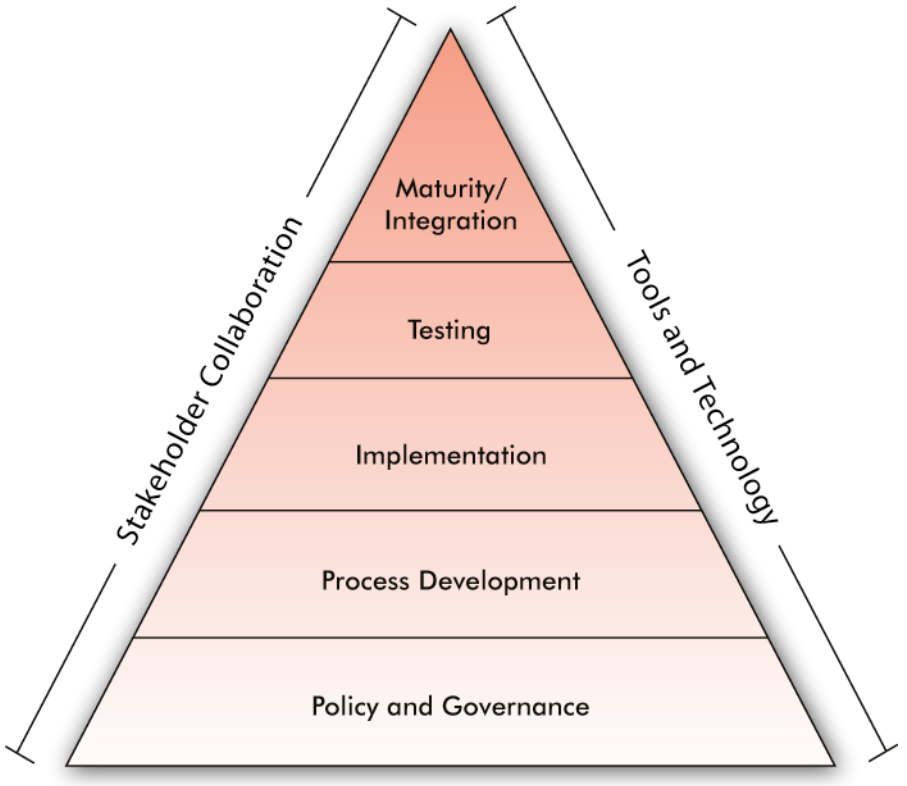
Metrics must also measure multiple facets of security program implementation

- Policy metrics – age of general information security policy, number of policies greater than three years old (older than FISMA)
  - Leading to the creation or update of policies
- Inventory metrics – age of data, frequency of update, etc.
  - Resulting in data calls and outreach, as necessary
- Process metrics – to assess the implementation of controls
  - Using NIST SP 800-53A (upon finalization) as a baseline
- Metrics on metrics – type and intent of additional metrics and/or oversight mechanisms in place
  - To determine effectiveness, necessity and compliance
- Monitoring metrics – type and frequency of network/system vulnerability scans, penetration tests, etc.
  - To formulate mitigation strategies, assign resources and ascertain real-time status reports
- Reporting metrics – timeliness, completeness and frequency of internal and external reporting, access to current and comprehensive data

HHS Metrics Dashboard Concept



Ultimately, FISMA should measure overall progress towards IT security program maturity



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