FIRST.Org, Inc

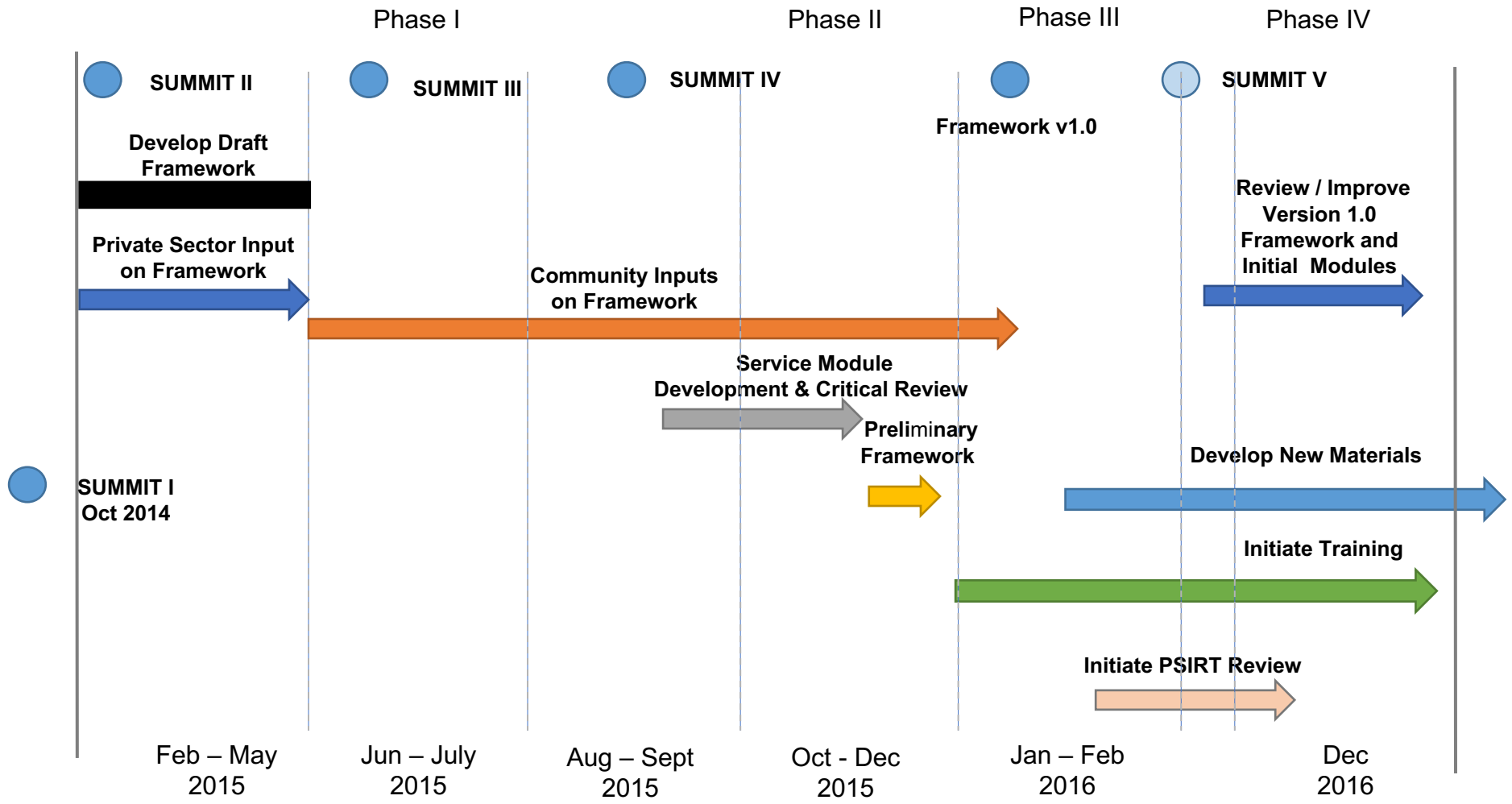
Incident Response Framework Journeys

Peter Allor
Education Advisory Board, Chair
FIRST.Org, Inc.

Education and Training

- It started with an idea…..it became a journey
- Then a Framework
- Then another
- Once upon a time CERT/CC

Program Timeline

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CSIRT Services Framework v 1.0

Service 1: Incident Management

1.1 Incident Handling
- Information Collection
- Response
- Coordination
- Incident Tracking

1.2 Vulnerability, Configuration, and Asset Management
- Vulnerability Discovery Research
- Vulnerability Reporting
- Vulnerability Coordination
- Vulnerability Root Cause Remediation

Service 2: Analysis

2.1 Incident Analysis
- Incident Validation
- Impact Analysis
- Lessons Learned

2.2 Artifact Analysis
- Surface Analysis
- Reverse Engineering
- Runtime Analysis
- Comparative Analysis

2.3 Media Analysis

2.4 Vulnerability/Exploitation Analysis
- Technical (Malware) Vulnerability/ Exploit Analysis
- Root Cause Analysis
- Remediation Analysis
- Mitigation Analysis

Service 3: Information Assurance

3.1 Risk/Compliance Assessment
- Critical Asset/Data Inventory
- Identify Evaluation Standard:
- Execute Assessment
- Findings and Recommendations
- Tracking
- Testing

3.2 Patch Management

3.3 Operating Policies Management

3.4 Risk Analysis/Business Continuity Disaster Recovery Advisement

3.5 Security Advisement

Service 4: Situational Awareness

4.1 Sensor/Metric Operations
- Requirements Development
- Identification of Necessary Data
- Data Acquisition Methods
- Sensor Management

4.2 Fusion/Correlation
- Determine Fusion Algorithms
- Fusion Analysis

4.3 Development and Curation of Security Intelligence
- Source Identification and Inventory
- Source Content Collection and Cataloging

4.4 Data and Knowledge Management

4.5 Organizational Metrics

Service 5: Outreach and Communications

5.1 Cybersecurity Policy Advisory
- Internal
- External

5.2 Relationship Management
- Peer Relationship Management
- Constituency Relationship Management
- Communications Management
- Secure Communications Management
- Conferences/Workshops
- Stakeholder Engagement/Relations

5.3 Security Awareness Raising

5.4 Branding/Marketing

5.5 Information Sharing and Publications
- Public Service Announcements
- Publication of Information

Service 6: Capability Building

6.1 Training and Education
- KSA Requirements Gathering
- Development of Educational And Training Materials
- Delivery of Content
- Mentoring
- Professional Development
- Skill Development
- Conducting Exercises

6.2 Organizing Exercises
- Requirements
- Scenario and Environment Development
- Participation In an Exercise
- Identification of Lessons Learned

6.3 Systems and Tools for Constituency Support

6.4 Stakeholders Services Support
- Infrastructure Design and Engineering
- Infrastructure Procurement
- Infrastructure Tool Evaluation
- Infrastructure Resourcing

Service 7: Research and Development

7.1 Development of Vulnerability Discovery/Analysis/ Remediation/Root Cause Analysis Methodologies

7.2 Development of Processes for Gathering/Fusing/Correlating Security Intelligence

7.3 Development of Tools

Framework – hierarchical approach

- Service Area
  - Service
    - Function
      - Sub-Function
        - Task
          - Sub-Task
            - Action

Simplified Definitions

- **Capability** – Can you do it?
- **Maturity** – How well can you do it?
- **Capacity** – How much can you do?

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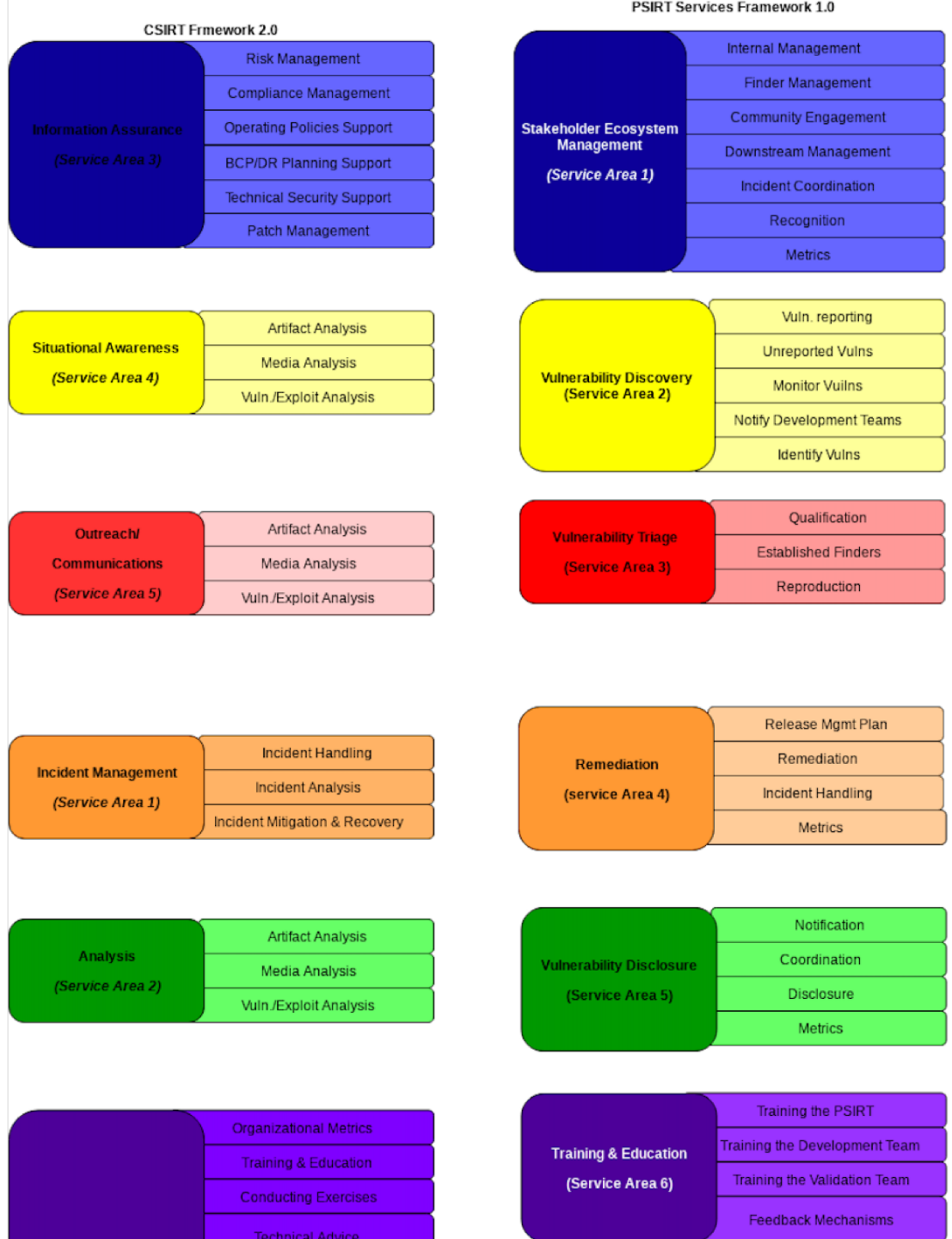

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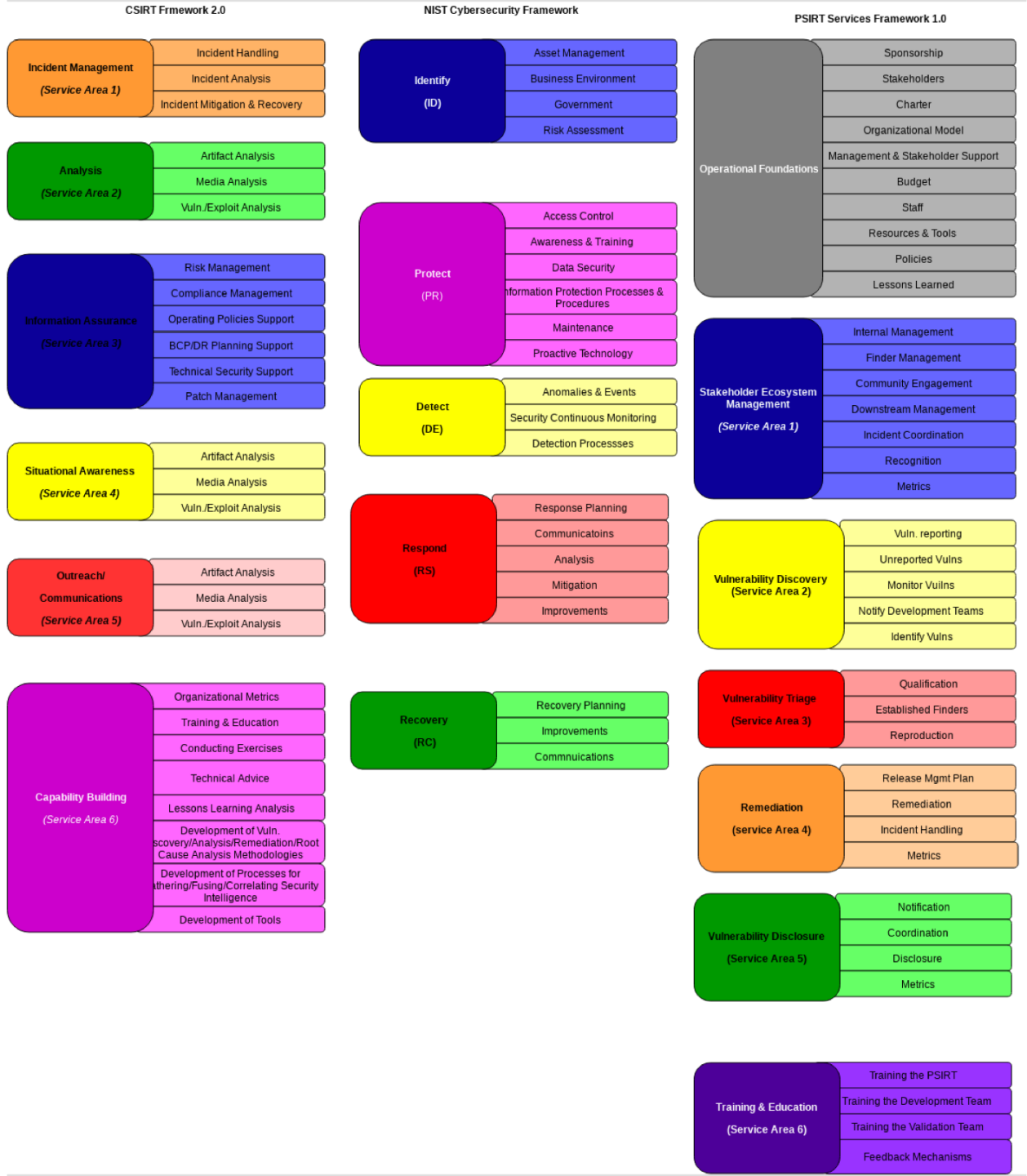
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Incident Handling
Incident Analysis
Incident Mitigation & Recovery
Analysis (Service Area 2)
Artifact Analysis
Media Analysis
Vuln./Exploit Analysis
Information Assurance (Service Area 3)
Risk Management
Compliance Management
Operating Policies Support
BCP/DR Planning Support
Technical Security Support
Patch Management
Situational Awareness (Service Area 4)
Artifact Analysis
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Outreach/ Communications (Service Area 5)
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Capability Building (Service Area 6)
Organizational Metrics
Training & Education
Conducting Exercises
Technical Advice
Lessons Learning Analysis
Development of Vuln. scovery/Analysis/Remediation/Root Cause Analysis Methodologies
Development of Processes for thering/Fusing/Correlating Security Intelligence
Development of Tools
NIST Cybersecurity Framework
Identify (ID)
Asset Management
Business Environment
Government
Risk Assessment
Protect (PR)
Access Control
Awareness & Training
Data Security
nformation Protection Processes & Procedures
Maintenance
Proactive Technology
Detect (DE)
Anomalies & Events
Security Continuous Monitoring
Detection Processses
Respond (RS)
Response Planning
Communicatoins
Analysis
Mitigation
Improvements
Recovery (RC)
Recovery Planning
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Commnuications
PSIRT Services Framework 1.0
Operational Foundations
Sponsorship
Stakeholders
Charter
Organizational Model
Management & Stakeholder Support
Budget
Staff
Resources & Tools
Policies
Lessons Learned
Stakeholder Ecosystem Management (Service Area 1)
Internal Management
Finder Management
Community Engagement
Downstream Management
Incident Coordination
Recognition
Metrics
Vulnerability Discovery (Service Area 2)
Vuln. reporting
Unreported Vulns
Monitor Vuilns
Notify Development Teams
Identify Vulns
Vulnerability Triage (Service Area 3)
Qualification
Established Finders
Reproduction
Remediation (service Area 4)
Release Mgmt Plan
Remediation
Incident Handling
Metrics
Vulnerability Disclosure (Service Area 5)
Notification
Coordination
Disclosure
Metrics
Training & Education (Service Area 6)
Training the PSIRT
Training the Development Team
Training the Validation Team
Feedback Mechanisms


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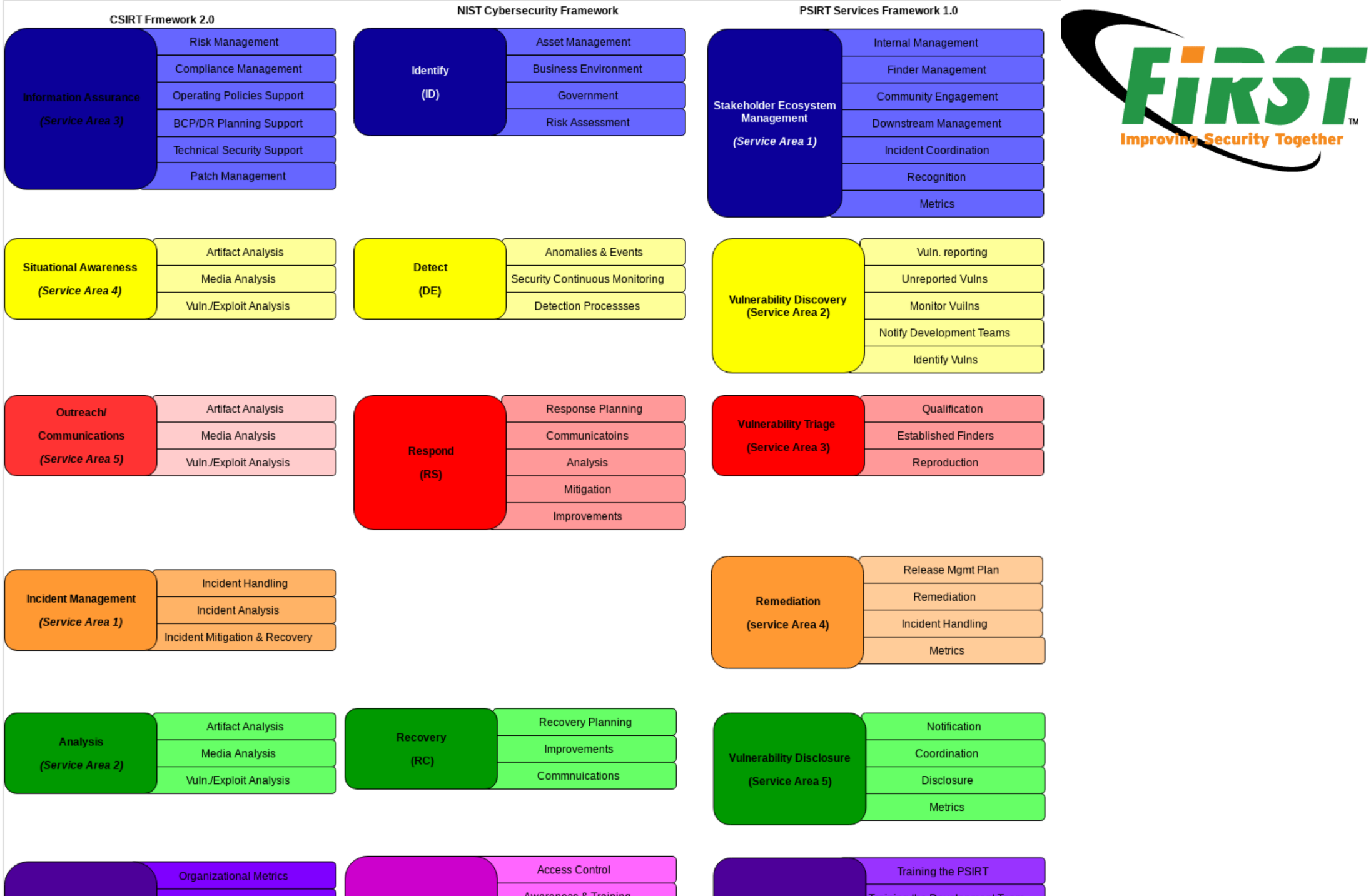
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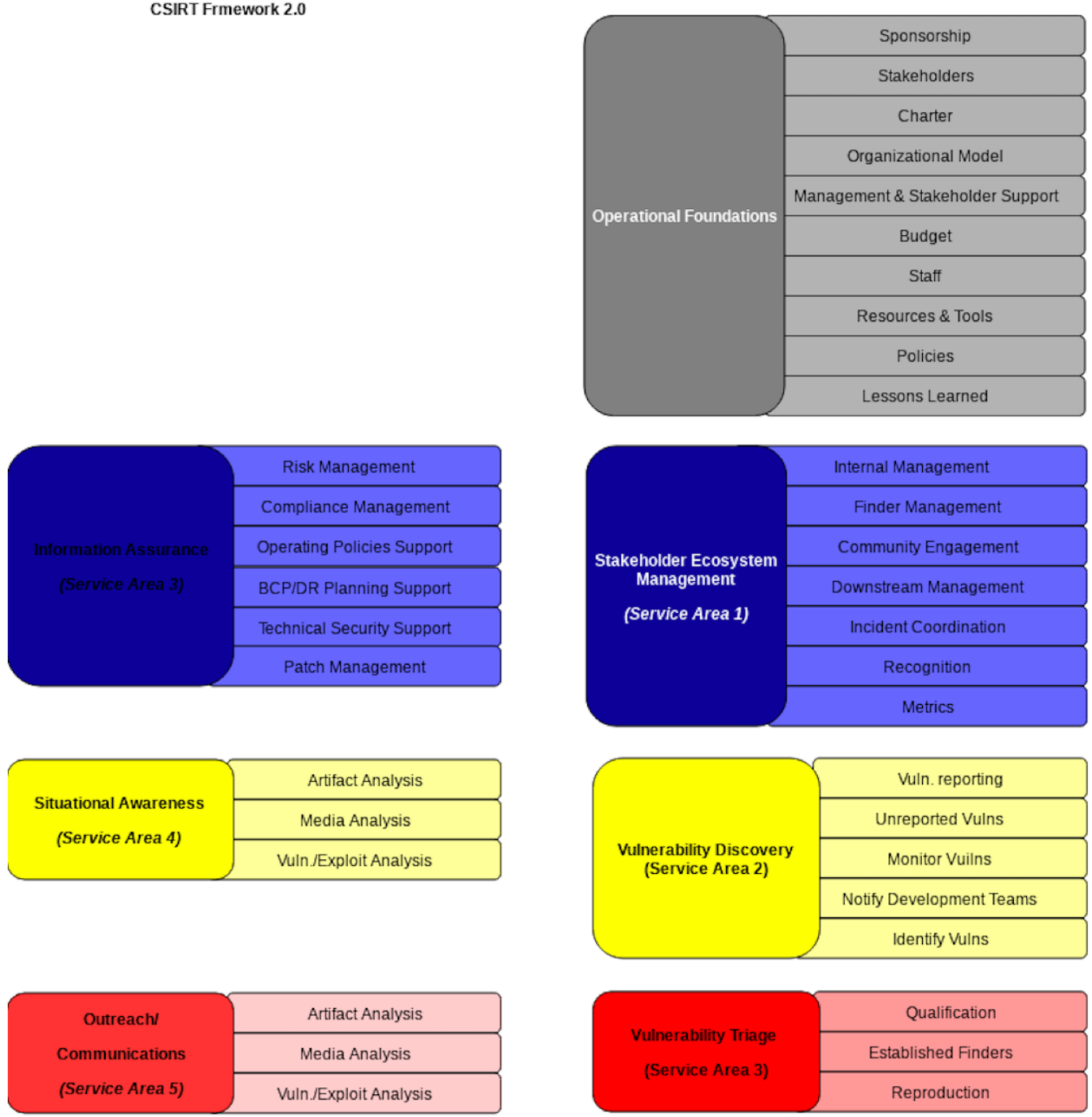


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