A Tale of Two Backlogs: How the FBI Manages a Conceptual and Working Backlog

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The Roadmap for Our Tale

I. FBI Mission and Priorities

II. Prioritization Activity

III. Now for those backlogs...
FBI Mission and Priorities

Tracy Brown / Program Manager
The mission of the FBI is to protect and defend the United States against terrorist and foreign intelligence threats, to uphold and enforce the criminal laws of the United States, and to provide leadership and criminal justice services to federal, state, municipal, and international agencies and partners.

– www.fbi.gov

"Spies. Terrorists. Hackers. Pedophiles. Mobsters. Gang leaders and serial killers. We investigate them all, and many more besides."

– www.fbi.gov
Sentinel serves the investigative and intelligence mission of the FBI by providing case management features to **all users** in the enterprise.

**Features**

- Document Authoring
- Workflow
- Intelligence Management
- Entity Management
- Search
- Leads
- Evidence Management
- Web Services

**Users**

- Special Agents
- Intelligence Analysts
- Supervisors
- Support Staff
- Executives
- Evidence Technicians
Competing Priorities

**Operational**
- Counterterrorism
- Counterintelligence
- Cyber Crime
- Public Corruption
- Civil Rights
- Organized Crime
- White Collar Crime
- Violent Crimes and Major Thefts

**Usability**
- Required system, so intuitiveness and ease of use are key to engaged adoption
- Varied user base (multiple roles, experience, technical savvy)
- 508 compliance

**System Health**
- Technical debt
- Iterative improvements
- “Evolving system” vs. operations and maintenance
Balancing Act

- How do we effectively balance the complexity of our user base and application against the priorities of operational needs, usability, and system health?
Prioritization Activity

Stephanie Bernardi / Lead Scrum Master
Activity – You Choose

- We’re going to distribute a list of requests from the enterprise.
- You have 6 months of available development time. Each request has been estimated in months.
- In groups of at least two, rank the list in the order in which you think these items should be developed and delivered to users. Not everything will be delivered.
This just in! The Deputy Director just called and decided he would like the team to focus on integrating with another application in use by the enterprise for Threat Management. It is now your top priority. The estimate to complete the integration is 1.5 months. Adjust your plans accordingly.
Activity – You Choose

- Now, we’ll ask a few groups to share their ranked lists and describe the discussions held during the decision making process.
- What aspect of the request(s) was most important to you?
- How did you handle the last minute Deputy Director’s request?
- How do you think the last minute Deputy Director’s request affects team morale and productivity?
Now for those backlogs...

Tracy Brown / Program Manager
Stephanie Bernardi / Lead Scrum Master
Give the People What they Want (and Need)!

- The nature of a user base and the attributes of incoming requirements should dictate the organization and cycle time of the work

- Example: Delivery of a new version of tax filing software each month wouldn’t make much sense since taxes are only filed once per year

- Example: Ensuring an application is colorful and entertaining may be important for an optional application gaining profit by securing a larger user base; but probably not as important for an application that is required for use either in a job role or by law.

So, what is it about the FBI that has led us to developing a conceptual and working backlog?
Giving the FBI What it Wants (and Needs)

- The Sentinel application is required for certain processes by FBI employees and contractors.
- It must support and respond to the FBI mission *in a reasonable timeframe*, and in doing so, the ever-changing threat picture of the world.
- It must not add administrative workload to its user base; we must maximize the efficiency of each interaction with the system.
  - Although certain processes must happen in Sentinel, the focus of much of the Bureau is to conduct investigatory functions *outside the system*.
Our Tale: Two Backlogs

- Conceptual Backlog
  - User Requests
  - Beta Testing Results and User Feedback

- Quarterly Prioritized List
  - Executive Requests
  - Enterprise Requirements Board

- Candidate List

- Staging
  - Product Team Requests
  - Technical Recommendations

- Development

- Working Backlog
Our Tale: Two Backlogs

- **Sources of Requirements**

![Diagram](image)

- User Requests
- Executive Requests
- Conceptual Backlog
- Quarterly Prioritized List
- Staging
- Development
- Working Backlog
- Enterprise Requirements Board
- Beta Testing Results and User Feedback
- Product Team Requests
- Technical Recommendations
Sources of Requirements

- Raw user feedback is gathered and triaged through several mechanisms
  - General feedback link available through application
  - Beta testing of new applications or features toggled on for certain users
  - Service tickets submitted by users
  - Training sessions
  - General interactions with users from the field or HQ
  - Team responds to every request

- Usually include both usability and operational needs
- Range in scope and complexity
Sources of Requirements

- Imparted or put forth by executives at various levels
- Helps maintain focus on the mission and benefit to the Bureau as a whole
- Can take precedence over other sources of requirements
- May be improvement of a general usability matter or an effort of particular operational impact, or have longer range strategic focus
Sources of Requirements

- As with any system, there are certain requirements that arise to ensure technical health is adequate.
- These requirements may include:
  - Upgrades of certain products
  - Research into new technologies
  - Refresh of technology and/or hardware
  - Periodic refactoring for performance gains or other purposes
  - Addition or maintenance of an automated testing suite to support near-continuous delivery
Our Tale: Two Backlogs

- Sources of Requirements
- Prioritization Authorities
Prioritization Authorities

- Representatives from each organizational Branch within the FBI
- Works with Sentinel team to prioritize collective set of requests from Users and Executive sources
- Ensures a regular rhythm for new activities (quarterly priorities)
- Ensures a relatively equitable distribution of opportunities over time to various Branches
- Provides transparency about what is being developed
- Allows necessary flexibility for Agile development and for arising operational needs
Prioritization Authorities

- For larger or more complex feature sets, a pattern of beta user testing is utilized to understand how well the feature may be accepted when available to everyone in production.
- As testing results are compiled (both qualitative and quantitative), it becomes clear which areas may require rework or are not being used correctly.
- Results may either become Team Requests or be folded back into the overall set of User Requests, or be shared with Training Team.
Prioritization Authorities

- Guidance from the technical architect as well as industry recommendations are used to dictate priority of product team requirements.
- Existence of new versions of various products may affect priority (e.g. keeping the entire enterprise in sync with certain versions).
Our Tale: Two Backlogs

- Sources of Requirements
- Prioritization Authorities
- Artifacts
Artifacts

- Raw requests from users and executives
- Each request varies in complexity, operational impact, number of users affected
Artifacts

- List is defined on recurring (quarterly) basis
- Applying high-level prioritization at this stage allows for Agile development and for arising operational needs
- Used to communicate quarterly plan to Enterprise (transparency)
- Once prioritized, team begins analysis and develops concept for the effort
Artifacts

The Conceptual Backlog is the series of initiatives that are likely to become developed in the coming quarters.
Artifacts

- Houses draft features, epics, and user stories
- Pitched, accepted, and estimated by team before moved to Development
Artifacts

- Houses matured user stories assigned to a particular team
- Items remain in the Development backlog through development, testing, and deployment phases
The **Working Backlog** represents items that have been specifically prioritized for a certain development cycle or cycle(s).
Our Tale: Two Backlogs

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- Executive Requests

- Candidate List
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- Conceptual Backlog
- Staging
- Development
- Working Backlog

- Beta Testing Results and User Feedback