

Food and Agriculture Sector Criticality Assessment Tool; *Current Use and Future Significance*

Shaun Kennedy

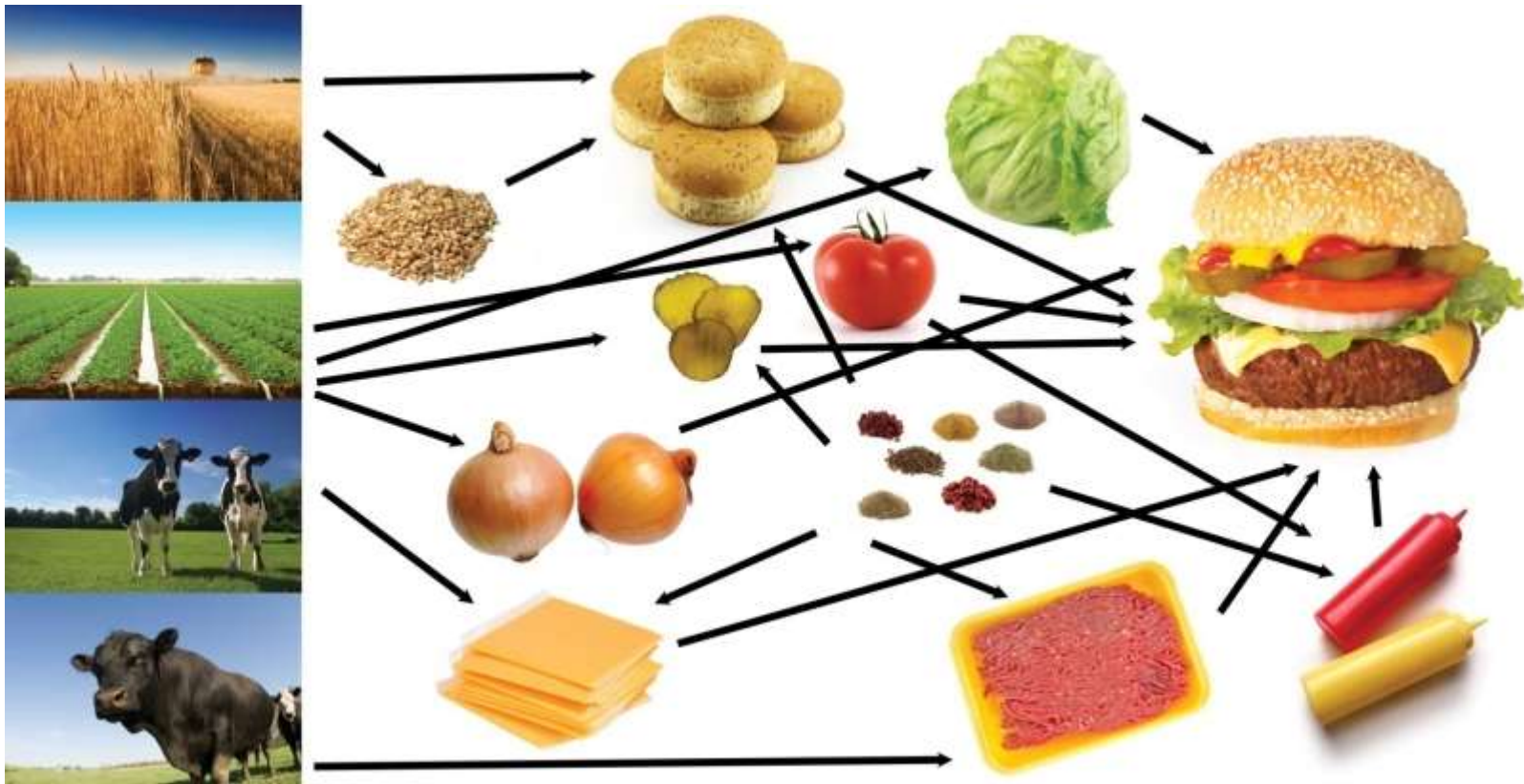
National Center for Food
Protection & Defense

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What is critical within the food and agriculture sector?

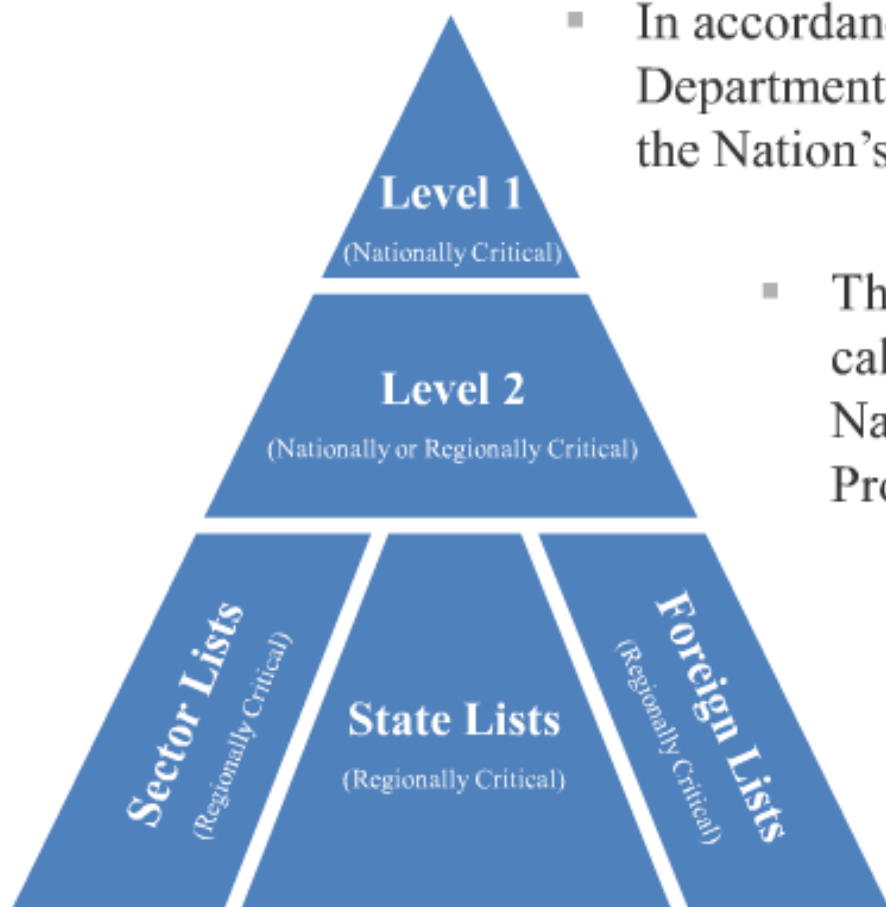


Food and Agriculture as Critical Infrastructure

- Homeland Security Presidential Directive (HSPD) 7, Critical Infrastructure and Key Resources
- HSPD-9, 2004 Defense of U.S. Agriculture and Food
- Every year DHS Homeland Infrastructure Threat and Risk Analysis Center (HITRAC) collects information on critical components to build a National CIKR risk profile



Spotlight: Infrastructure Prioritization



“List of Lists” Approach

- In accordance with the 9/11 Commission Act, the Department of Homeland Security maintains the lists of the Nation’s most critical infrastructure.
- The lists are developed through an annual data call using criteria developed by HITRAC’s National Critical Infrastructure Prioritization Program (NCIPP).
- The Program identifies both domestic and foreign “too critical to fail” infrastructure, which are then used to inform homeland security grant programs, and other critical infrastructure protection activities.

Challenges

- Government and private sector are jointly responsible for protecting the vital components of CIKR
 - Private sector not generally included in prior assessments
 - Private sector understandably concerned about sharing sensitive data
- Food system is not suited for asset and facilities based approach
 - Very few individual assets comprise a critical element
 - Systems and their impact on systems more relevant

Challenges (continued)

- No quantitative way to compare criticality of one subsystem vs. another with existing tools
- No consistent data from state to state
- No means of incorporating systems that cross state or country boundaries
- Criteria for critical infrastructure designation did not fit this sector so food and agriculture ineligible from the start

Food and Agriculture Sector Criticality Assessment Tool

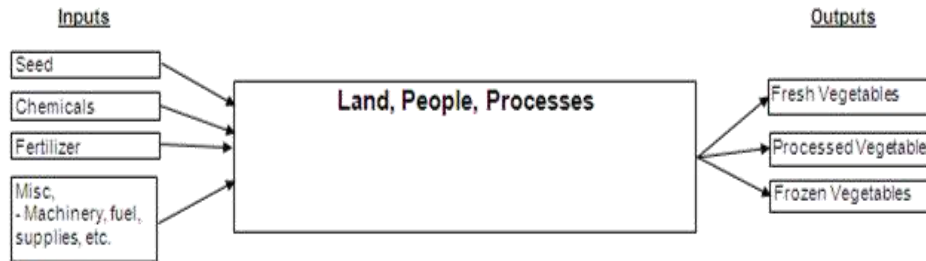


- Subsystem level assessments vs. looking at proprietary information on assets and facilities
- Standardizes threat and consequence terminology
- All hazards approach
- Downstream consequences incorporated

Assessment Process

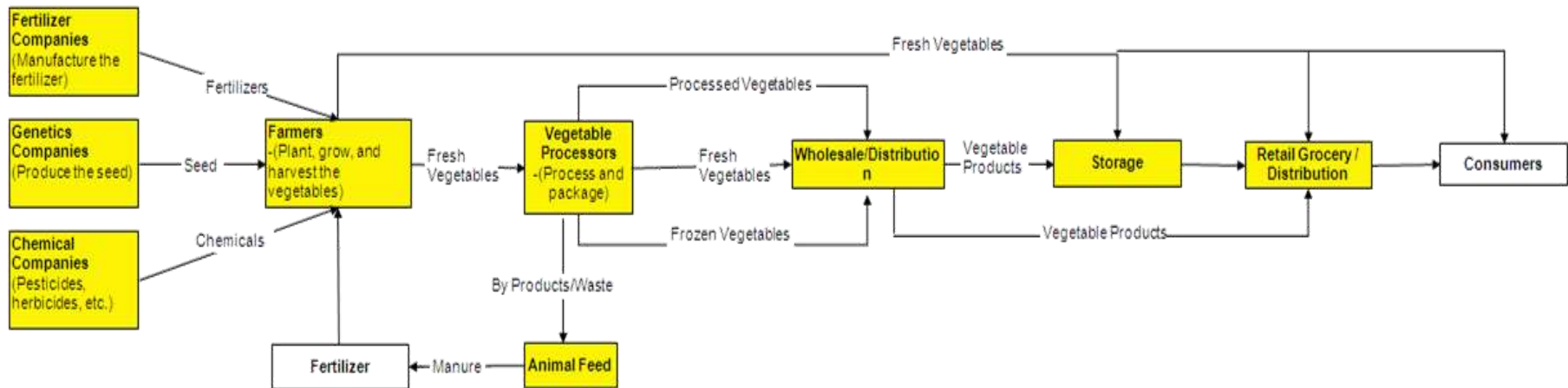
- Identify the food system for evaluation
- Identify public, private and academic experts associated with the system
- Bring the group together to work through an evaluation
 - Relationship building is an intended outcome
- Share the results among participants for their use

Vegetable Production Input/Output



F | A | S | C | A | T

Major Segments in the Vegetable Industry



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F | A | S | C | A | T



Potential Threats	Potential Direct Consequences	Impacts of Attack or Disaster	2nd - 3rd Order Consequences
FAD	Short Term System Shut Down	Limited to 1 state	Damage to Customers
Misinformation/Public Messaging	Long Term System Shut Down	> 1 year to recover	Loss of Public Confidence
Intentional Adulteration	Loss of Key Input	10,000 Casualties-Human	Loss of Market Access
Radiological Contam.	Loss of Key Output		Damage to Tax Base
Lost Access	Loss of Access to Customer(s)		Government Cost to Respond
Pathogen Contamination	Brand Damage		Loss of Access to Insurance
Chemical /Toxin	Mass Casualty- Human		
Loss of operation rights	Product Shortage		
	Economic Loss		
	Reduced Output		
	Cost of Response		
	Loss of Capital		
	Credit Access		



Multi-State Partnership for Security in Agriculture FAS-CAT Project

- Training and assessment workshops in 10 states
- Over 50 subsystems assessed
- Diverse subject matter expertise
- Adapted to changing DHS criteria and versions of the tool

WITT
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Takeaway themes

- Essential to bringing all players to the table
- Strong public-private partnerships
- Third party facilitation
- Process as valuable as the product
- Targeted risk reduction / mitigation strategies
- Using FAS-CAT as the basis for submissions successful



Successful Submissions Nationally

- Food and agriculture submissions from >25 states
- Over 120 subsystems accepted as Level 2
- Subsystems represent >1,000 assets
- Every state that submitted an assessment resulted in at least one subsystem accepted as Level 2



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FASCAT

FASCAT Web Guide
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FROM THE FOODSHIELD BLOGS

Recall: FDA, Hallmark Crab Meat (Listeria)

Posted: Tuesday, September 21, 2010

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Weekly FoodSHIELD Trainings - CANCELED for Sept. 24th

Posted: Tuesday, September 21, 2010

» Read Full Post

Recall: FDA, Midland Farms (Salmonella & Listeria)

Posted: Thursday, September 9, 2010

» Read Full Post

Recall: FDA, Best Foods (Salmonella)



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Assessment Overview

Organization Name: AAA - BBB Agency
Contact First Name: Grandville
Contact Last Name: Ricks
Job Title: Senior RIA Developer
Work Phone: 555-555-5555
Cell Phone: 777-777-7777
Address: 1234 Intel Way
City: Stillwater
State: Minnesota
Postal Code: 55082
Email: gricks@ejhassociates.com

Affiliation:
Participant Type:
Subsector/Organization Component: Food animals
Commodity/Product Chain: Beef
Subsystem/Component as Risk: Breed Stock
Date Completed: 07/11/2010
Accessible 24 Hours: No

Threats/Consequences

Threats


- Chemical/Toxin
- Destruction
- Drought
- Exotic Plant Pest/Disease
- FAD
- Food Pathogens Veg.
- Intentional Adulteration
- Loss of Operation Rights
- Lost Access
- Misinformation/Public Messaging
- Pathogen Contamination
- Plant Disease
- Plant Pests
- Production/Processing Disruption
- Radiological Contamination
- Theft

Consequences

- Brand Damage
- Cost of Response
- Credit Access
- Economic Loss
- Long Term System Shut Down
- Loss of Access to Customer(s)
- Loss of Capital
- Loss of Key Input
- Loss of Key Output
- Loss of Seed Source
- Loss of Tourism
- Loss/Contamination of Breed Stock/Plant Stock
- Loss/Contamination of Herd/Flock
- Mass Casualty
- Product Shortage
- Reduced Output
- Short Term System Shut Down

Probability	+
Critical	+
Recovery	+
Category	+
Concentration	+
Area	+
Participants	+
Affiliations	+

Search

 [Export to Excel](#)

Below is a snapshot of your specified data. Please export your query to review the entire recordset.

FAS-CAT Search Results				
Cumulative Score	Weighted Score	Subsector	Commodity	Subsystem
84	101	Plant/Produce	Vegetable	Farm Opns
85	102	Warehouse	Retail Opns	Warehouse
85	102	Transportation	Dairy	Sale Barns
85	102	Transportation	Beef	Sale Barns
89	107	Food animals	Poultry	Layer Operations
93	112	Food animals	Dairy	Milking Parlor
99	134	Processing	Vegetable	Processing

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FAS-CAT 3.0 - Already Done

- Web based version
- Transportation system documentation
- Economic data by North American Industry Classification System (NAICS) code at the county level
 - Employment and income
 - Household and government consumption

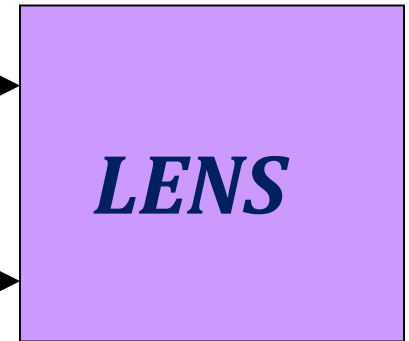
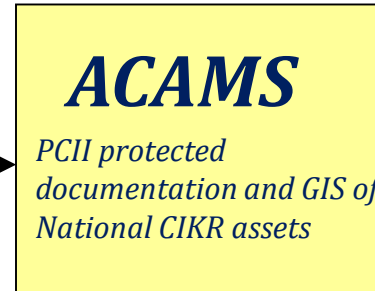
FAS-CAT 3.0 Still To Come

- Integration with ACAMs and IDCA
- Integrate IndustryDIR roles and function capabilities into critical sub-system contacts
- Align FASCAT with new DHS version 4 taxonomy requirements
- Facilitate FASCAT deployment to all 50 states including training modules

Supporting the Data Call

FASCAT

1. *Systems based approach to document and prioritize supply chain sub/systems and components**
2. *Employs comparative risk analysis of characteristics, potential threats and event consequences*
3. *Facilitates socialization and networking of sector specific SME's*
4. *Enables Standardization of analytic methodology, vocabulary/ taxonomy, and definitions*
5. *Provides for documentation and understanding of the entire commodity supply chain*
6. *Correlates economic and employment data to subsystem/components for modeling system impacts*



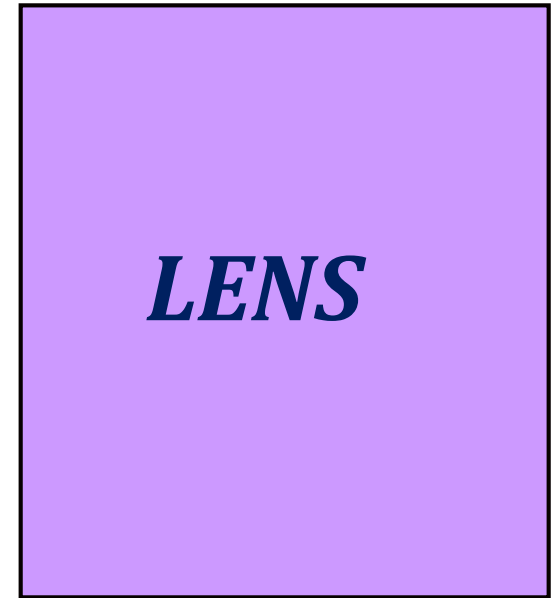
**This is a first as this never been attempted on a national basis*

The Linking Encrypted Network System (LENS)

LENS is a data warehouse and suite of data collection applications supporting DHS activities, primarily Infrastructure review and assessment.

LENS information is used to support Homeland Security Presidential Directive (HSPD)-7, Critical Infrastructure Protection.

LENS provides IP detailed authoritative vulnerability information for physical security, security force, security management, interdependency, protective measures, and mitigation.

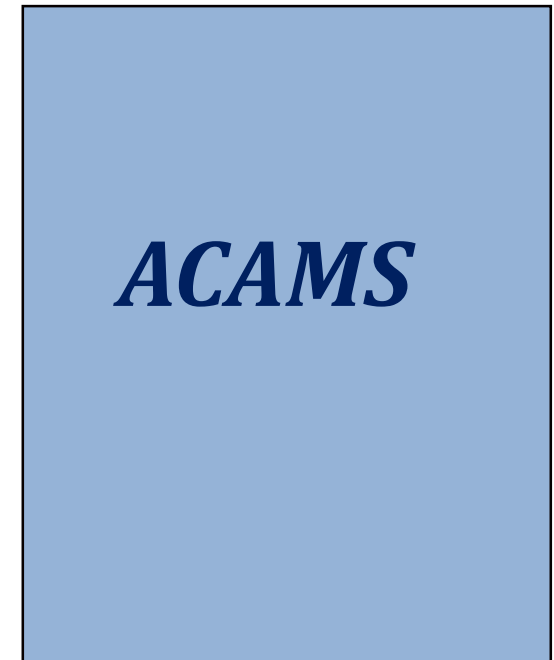


Automated Critical Asset Management System (ACAMS)

ACAMS - Provides a mechanism to deliver tailored infrastructure information to State and local users for prevention, protection, response and recovery.

ACAMS - is PCII protected documentation and provides for GIS of National CIKR assets

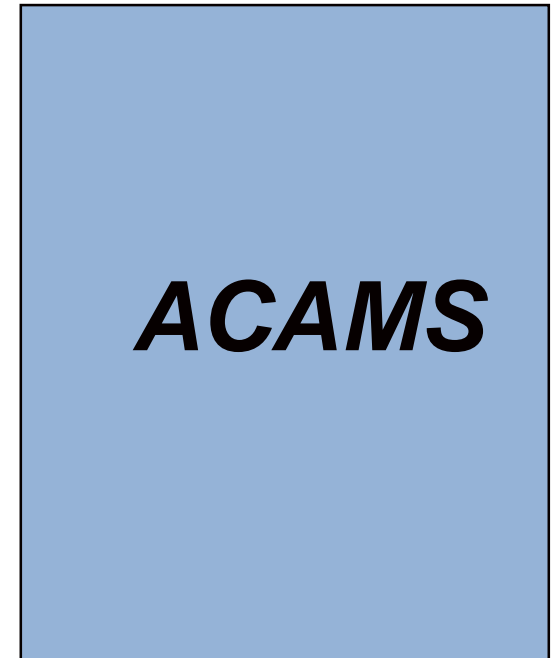
PCII - The Protected Critical Infrastructure Information Program is an information-protection program that enhances information sharing between the private sector and the government.



Automated Critical Asset Management System (ACAMS)

The Protected Critical Infrastructure Information (PCII) Program protects shared data from:

- The Freedom of Information Act (FOIA)
- State and local disclosure laws
- Use in civil litigation.
- PCII cannot be used for regulatory purposes and can only be accessed in accordance with strict safeguarding and handling requirements

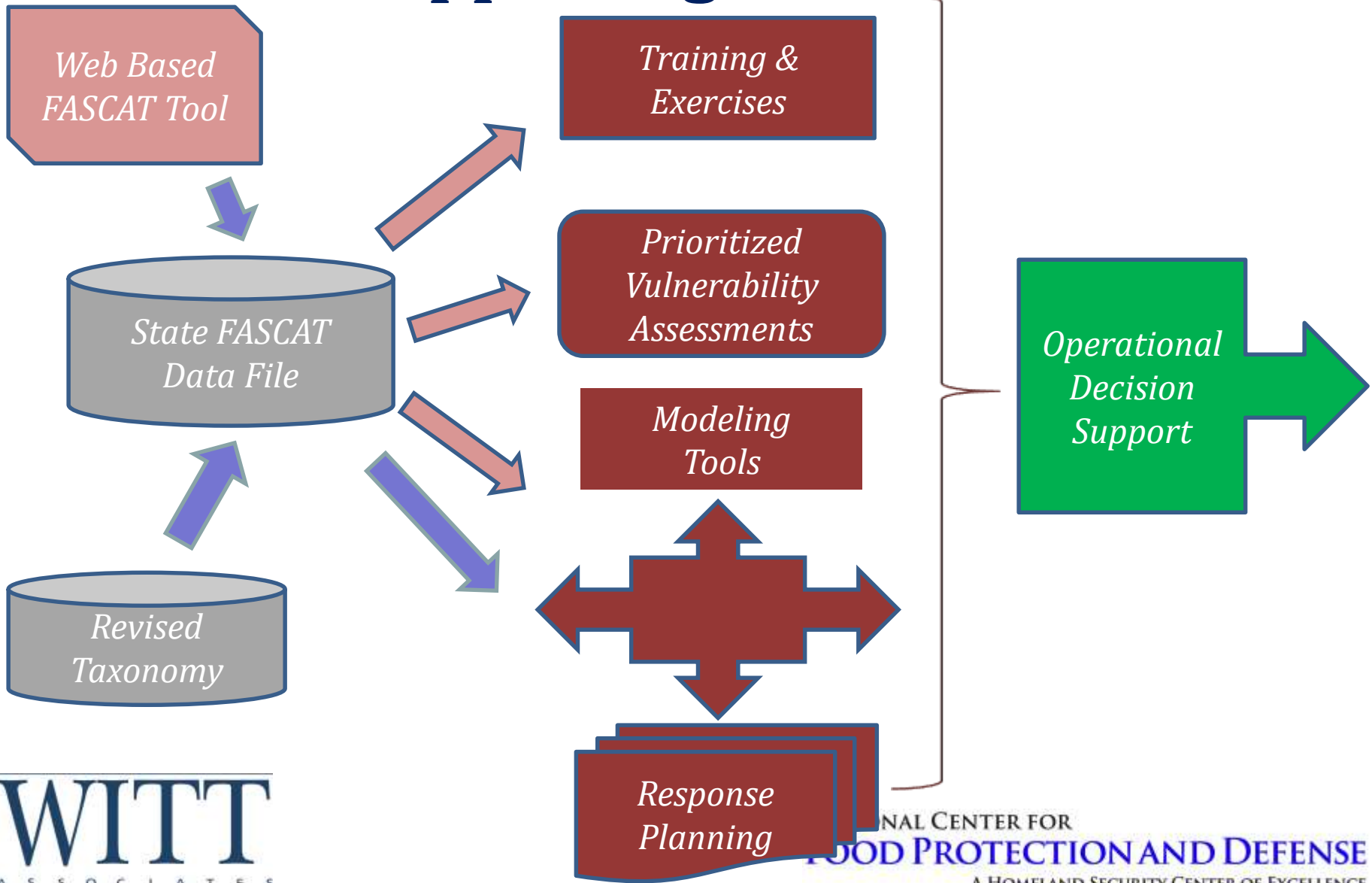


Infrastructure Data Collection Application (IDCA)

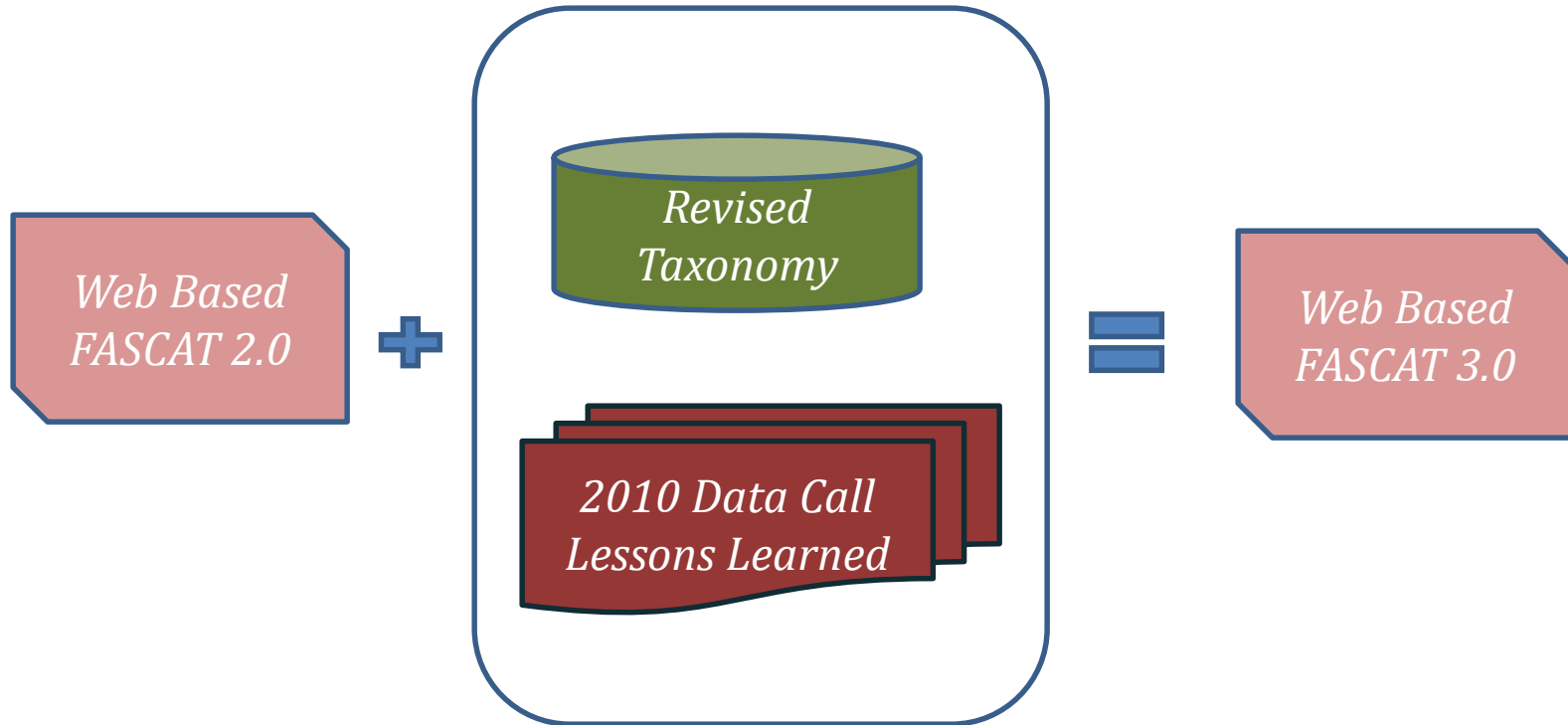
- Supports data collection for IP mission partners, State, and Sector Specific Agency (SSA) submission and nominations to the NCIPP Annual Data Call
- Provides data for supporting nominations and justifications of Level 1-4 Critical Infrastructure

IDCA

FASCAT - Supporting the States



FASCAT Going Forward



After Deploying FAS-CAT

- State and regional utility a key aspect of why to go through the process
 - Emergency management planning
 - State mitigation efforts
 - Building public/private relationships
- Solution for how to invest in food and agriculture still to be developed
 - Focus of the session 10/21

Questions?

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