

Who We Are

- **Renewable Chemicals & Advanced Materials Alliance**

- Formed in 2013 by four EPA Presidential Green Chemistry Award winners to drive government policy on behalf of the renewable chemical sector

- **Corinne Young LLC**

- Provide strategic counsel, enabling access to capital & speed to market for competitive advantage. Expertise in securing government incentives, eliminating regulatory barriers, and developing relationships, both B-to-G and B-to-B

What is this Government Funding?

It is...federal, state & local

- look comprehensively at range of funding available

It is...policy driven

- the funding is available for a reason

It has...different governing principles

- politics & policy influence decisions

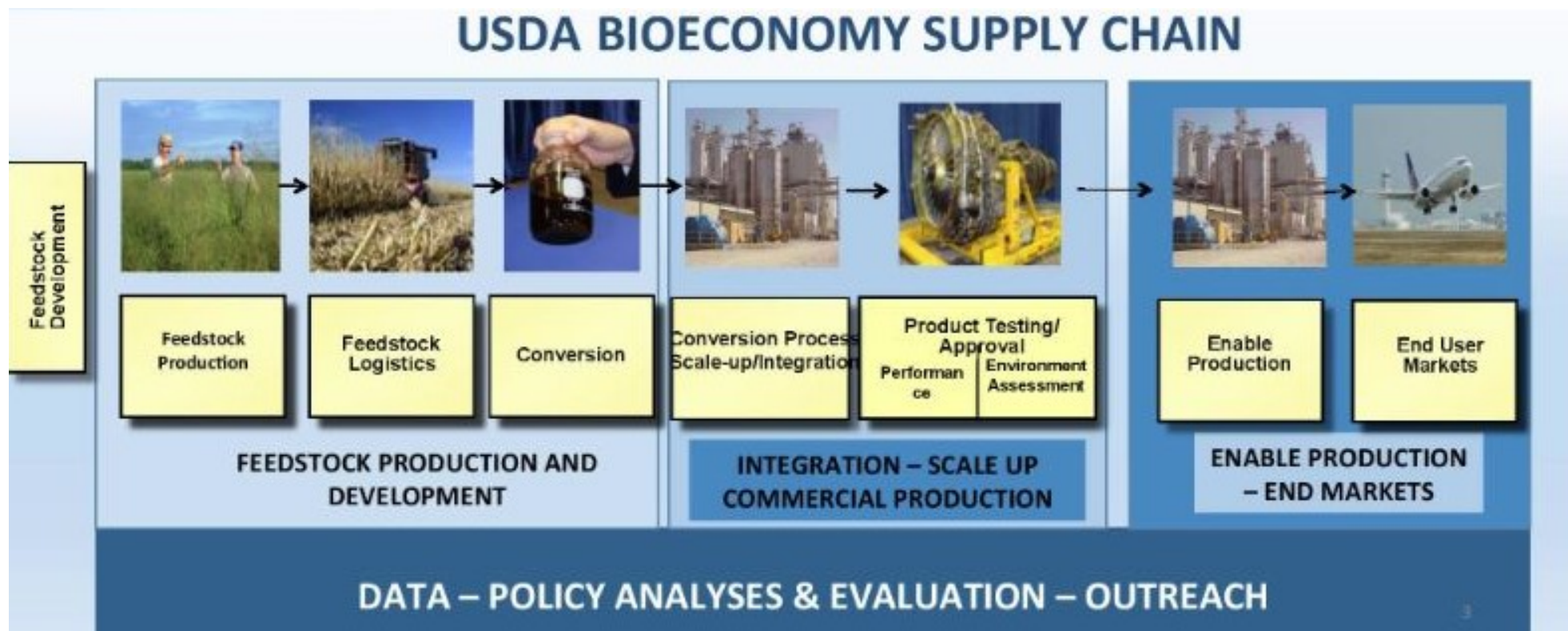
Is there Government Funding for Green Chemistry? Yes.

- **Example: green chemistry Principle #7**
 - “Use of Renewable Feedstocks”
- **Correlates with larger US policy priorities:**
 - Creating energy independence
 - Creating jobs for rural America
- **Translated as Administration policy imperative**
 - Grow the Bioeconomy!

Analyzing & Tracking Progress Bioeconomy

- *White House National Blueprint for Bioeconomy (2012)*
- *USDA Report: Why Biobased? (2014)*
- *An Economic Impact Analysis for Congress of the U.S. Biobased Products Industry (2015)*
- *Federal Activities Report on Bioeconomy (2016)*
- *Building the Billion Ton Bioeconomy (2016)*

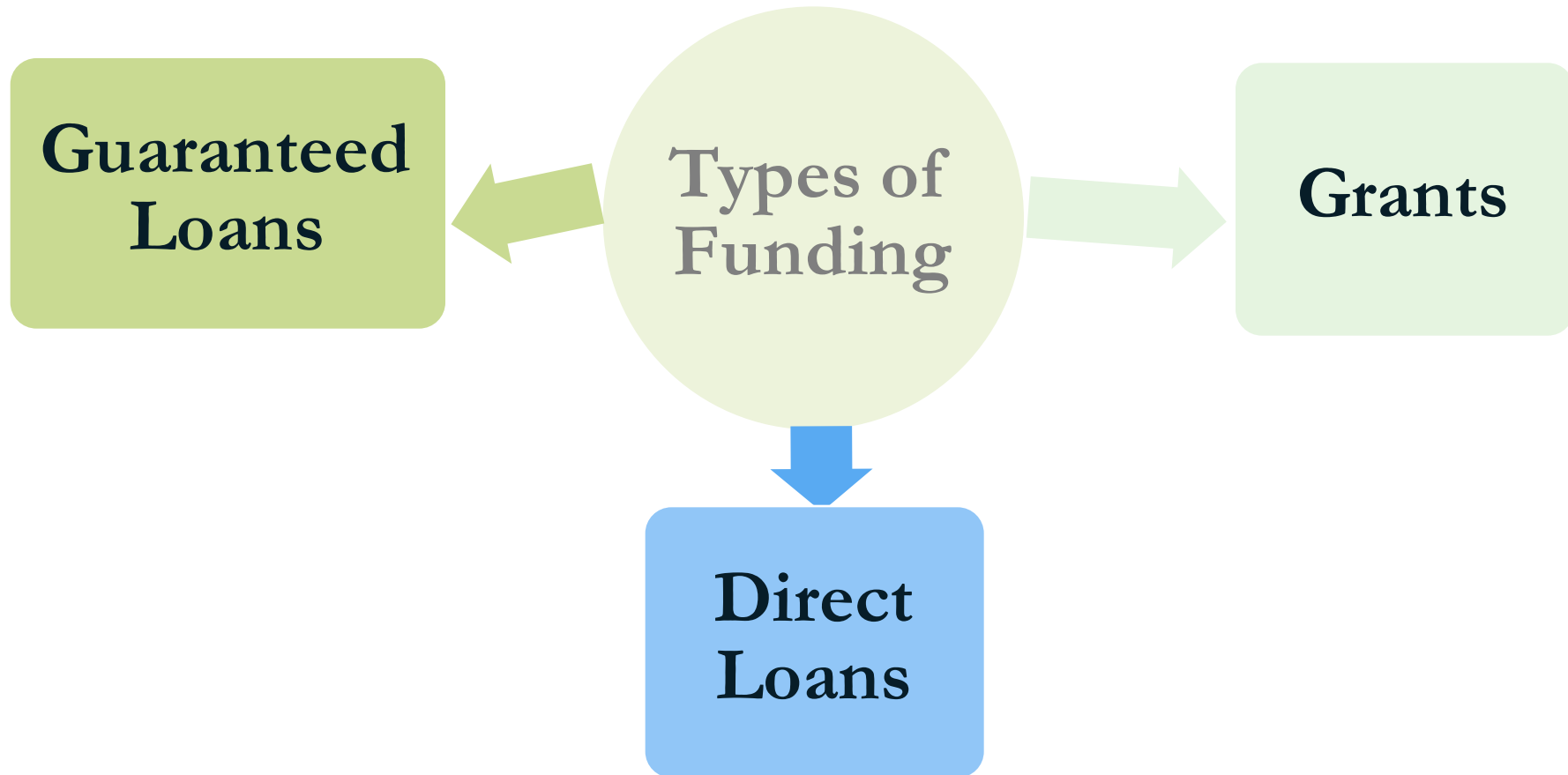
How USDA Approaches Bioeconomy



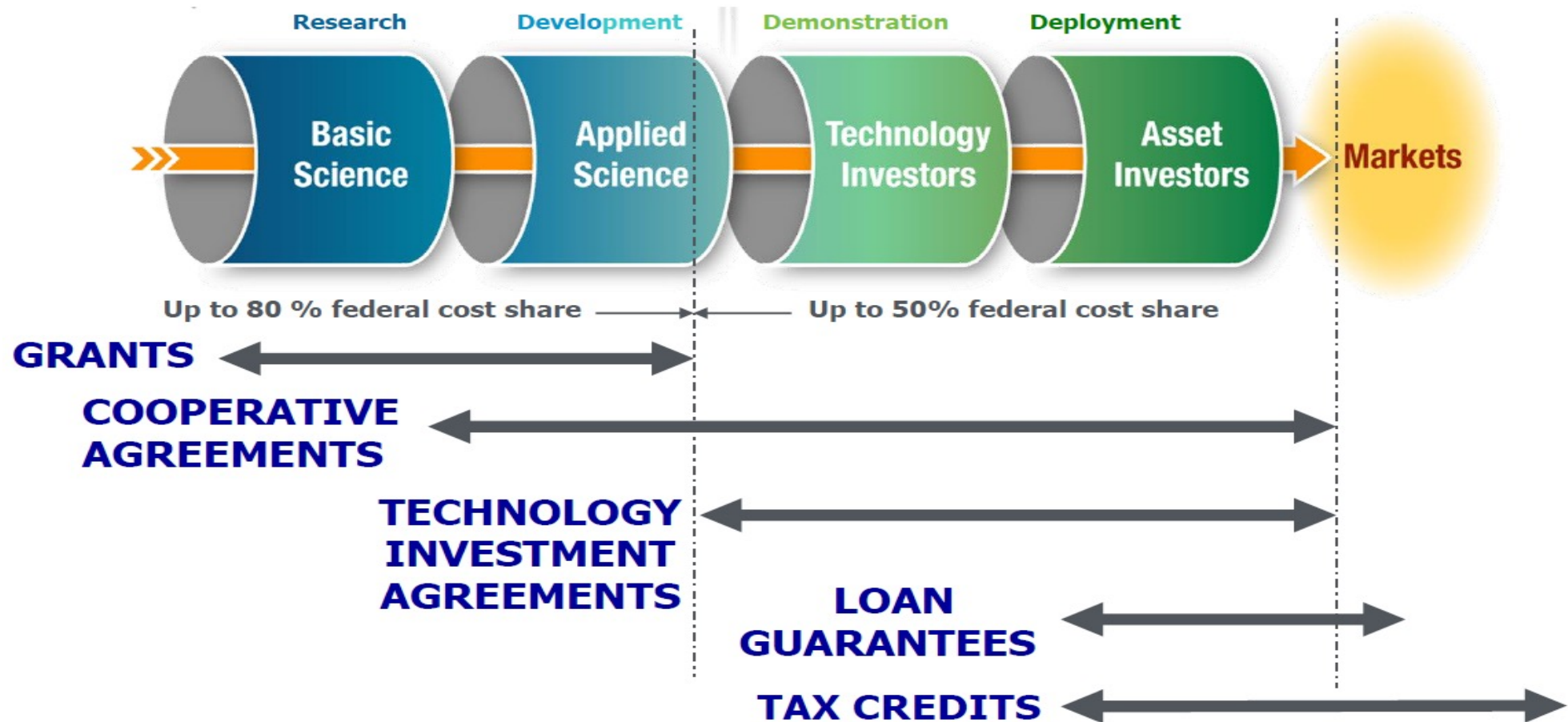
USDA Programs Driving Bioeconomy

USDA Departments	Production & Development	Integration & Scale-up	Enable Production & End Markets
Agricultural Marketing Service			X
Agricultural Research Service	X	X	X
Climate Change Program Office		X	
Farm Service Agency	X	X	X
Forest Service	X		
Foreign Agricultural Service			X
National Institute of Food & Agriculture	X	X	X
Natural Resources Conservation Service	X	X	
Rural Development		X	X

USDA Programs Funding Bioeconomy



DOE Bioenergy Technologies Office: Funding



Beyond Bioeconomy...

- Many sources of funding
- May not be called “green chemistry”
- Look for synergies with other policy priorities
- Consider how ubiquitous “chemistry” is – what are agencies trying to achieve, particularly with respect to:
 - Environmental benefit
 - Energy efficiency
 - Advanced manufacturing

DOE: Clean Energy Manufacturing Innovation Institute

- **Modular Chemical Process Intensification - geared toward processing industries in the U.S. manufacturing sector to:**
 - improve energy efficiency
 - reduce feedstock waste
 - increase scalability and improve productivity by merging and integrating separate unit processes (mixing, reactions, separation) into single modular hardware elements of reduced size, higher efficiency and scalability.

NSF: Chemical Catalysis Program

- **Research on chemistry of catalytic processes at the molecular level. Submissions that address national needs for sustainability are particularly encouraged**
 - 1) new catalysts and catalytic processes that will replace rare, expensive and/or toxic compounds or nanomaterials with earth abundant, inexpensive and benign alternatives;
 - 2) new chemistries to economically recycle chemicals that cannot be replaced, e.g. phosphorus and the rare earth elements;
 - 3) new chemistries to convert non-petroleum based sources of organics to feedstock chemicals; and
 - 4) new environmentally-friendly chemical reactions and processes that require less energy, fresh water, and/or organic solvents than current practice.

NIFA: Crop Protection and Pest Management

- **Addresses issues related to pests & management using IPM approaches at state, regional & national levels.**
 - projects that will increase food security and respond effectively to other major societal challenges with comprehensive IPM approaches that are economically viable, environmentally sound and will help protect human health.
 - addresses IPM challenges for emerging issues and existing priority pest concerns that can be addressed more effectively with new and emerging technologies.

EPA: Source Reduction Assistance (SRA)

Awards support pollution prevention through source reduction and resource conservation work. Fund projects that support:

- Climate Change Mitigation/Prevention of Greenhouse Gas Emissions,
- Food Manufacturing and Processing
- State or Community Approaches to Hazardous Materials Source Reduction

Keep in Mind

Funding specific projects

- Expect to work for government funding
- Do not wait until FOA opens to act
- Invest to socialize your project – before you ever ask for \$\$

Changing policy around “green chemistry”

- Don't be a purist
- Look for existing common ground and build from there