

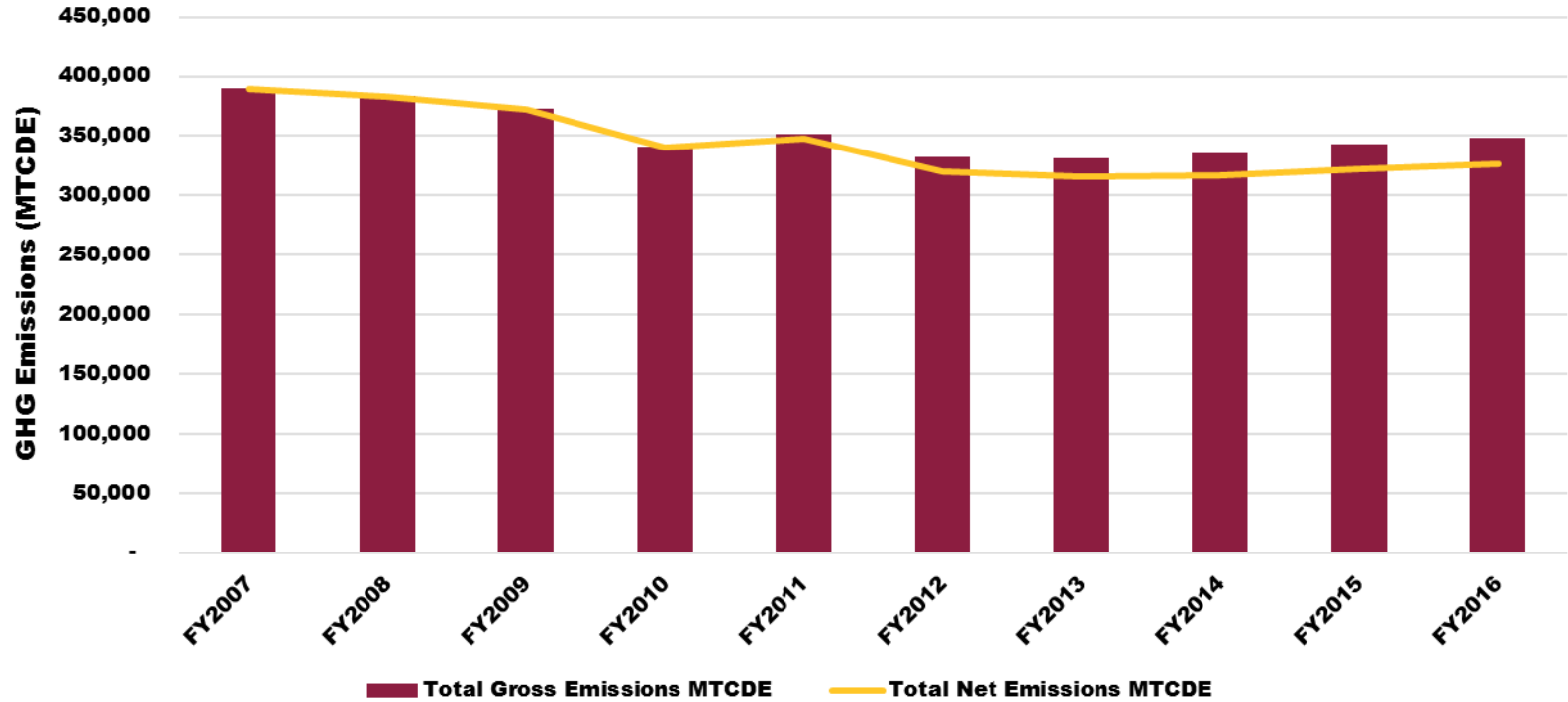
**SCN Green Infrastructure Working Group Meeting**

# **Offsetting carbon emissions at Arizona State University**

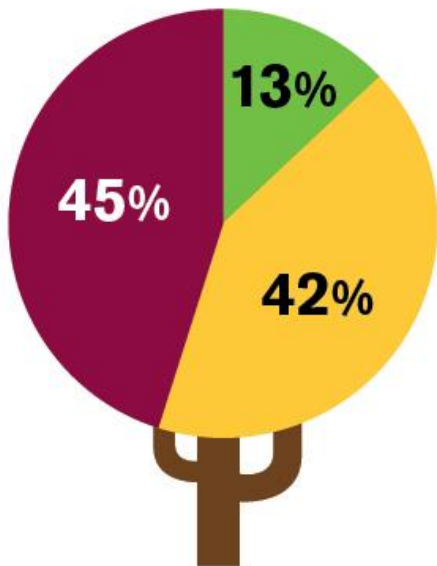


# ASU Gross and Net Greenhouse Gas Emissions

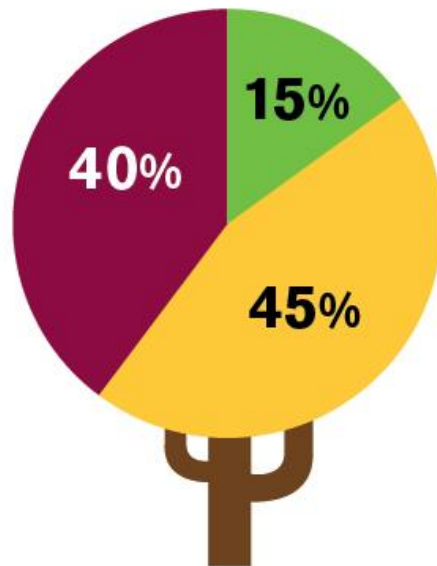
FY 2007 - FY 2016



# ASU's GHG inventory



**2007 net emissions:**  
389,418 metric tons



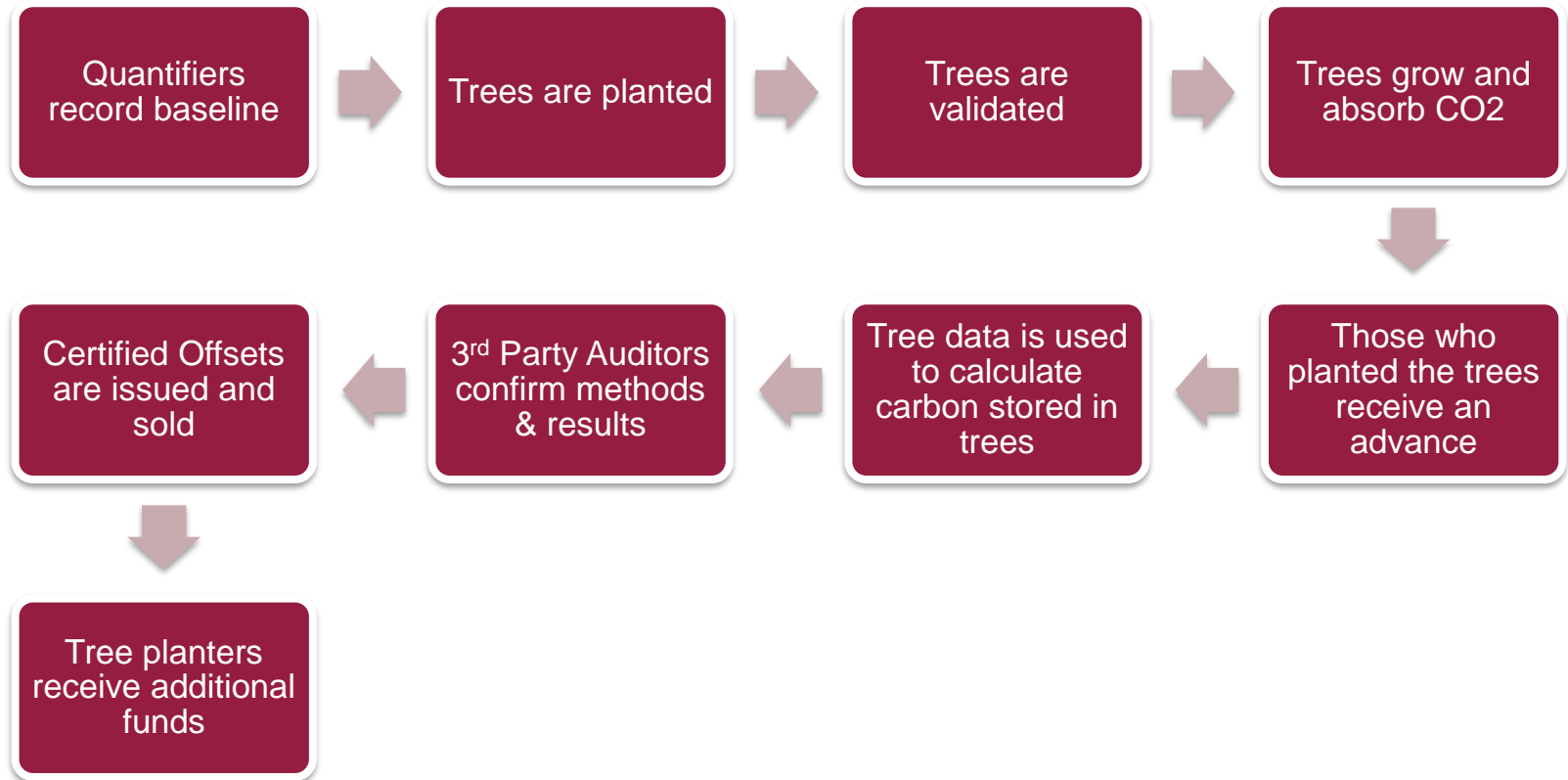
**2016 net emissions:**  
326,796 metric tons



**Carbon offsets are**  
**verified, measurable**  
**GHG reductions, made**  
**in order to compensate**  
**for emissions created**  
**elsewhere.**



# Typical carbon offset process...



# **How can ASU...**

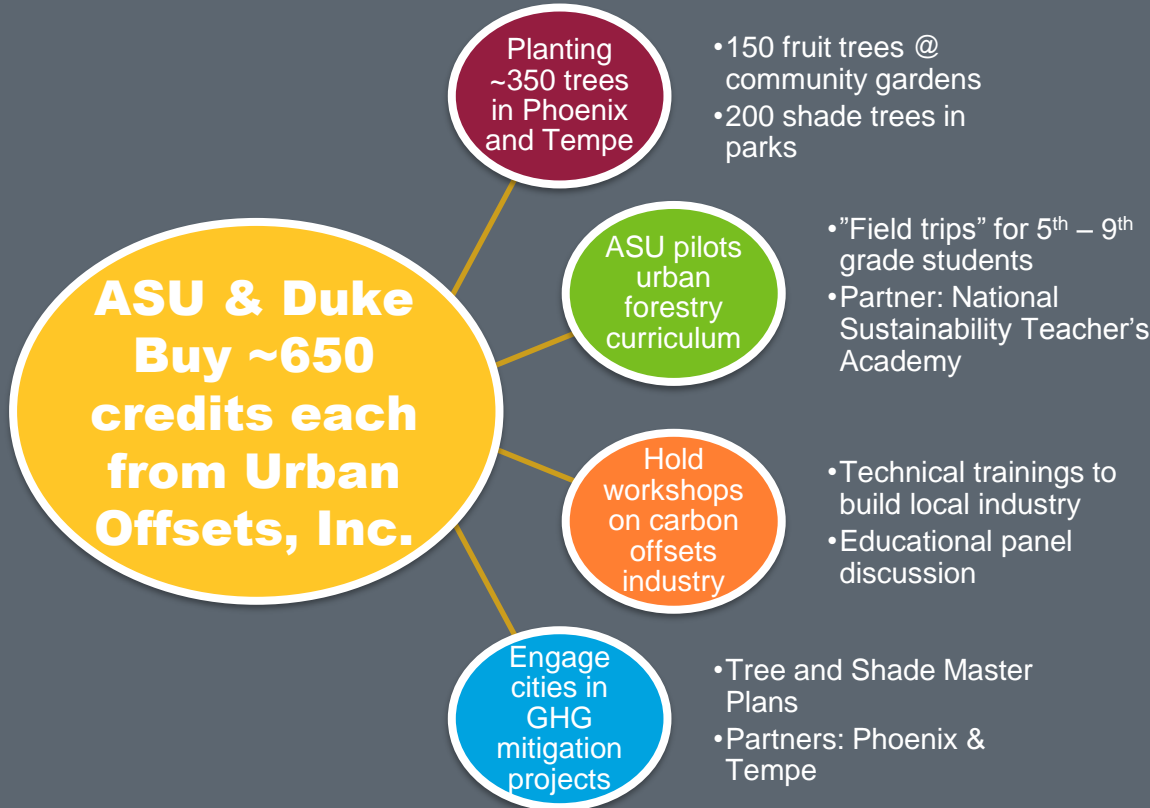
**Reduce Scope 3 (and Scope 1) emissions through carbon offsets in a way that 1) provides benefits to the local community 2) enhances education and research 3) is a responsible use of funds?**

# Why urban forestry?

1. Trees absorb CO<sub>2</sub> and other harmful atmospheric toxins
2. Many “co-benefits” to the community! To name a few...

Mitigate urban heat island effect  
Socioeconomic & cultural benefits  
Improve shade cover  
Beautify public spaces  
Increase food resilience  
Decrease utility demands  
Improve air quality  
Retain storm water runoff  
Community engagement  
Improve walkability  
Decrease surface temperatures  
Improve community health  
Psychosocial benefits  
Take action against climate change

# 2017-2018 Urban Forestry Pilot



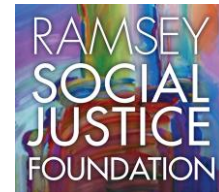
City of Phoenix



Tempe



Duke Carbon Offsets Initiative  
DUKE UNIVERSITY





# What we did.

Learned from &  
Partnered with  
Duke University

- Duke matched ASU's purchase of 666 offsets from urban forestry projects in Tempe and Phoenix (\$9,990 or \$15/ton)

Received a grant

- ASU used the combined investment as a match for an AZFFM Grant to add programming, education, and research to the carbon offset purchase

Planted trees!

- Urban Offsets, Inc. paid the cities of Phoenix (300) and Tempe (150) to plant trees

Private Donor

- The project caught the eye of a local philanthropist that donated funds to support and expand the project

Programming,  
Education, &  
Research

- Conducting verification/validation training
- Hosting Duke and Urban Offsets for a lecture
- Developing curriculum for Grades 5-9
- Hosting events to promote the program to other cities
- Researching carbon emissions associated with tree maintenance

# Quiñcea Brownfields to Healthfields Planting

39 edible trees in a lower-income community garden with social enterprise



ASU addresses audience at the kick-off event

# City of Phoenix Tree Planting

## 41 trees in a lower-income community park



Phoenix public & elected officials with ASU & Urban Offsets representatives

# City of Tempe Tree Planting

42 trees in a lower-income community park



Mayor Mark Mitchell addresses volunteers

**What are we**

**doing** **moving**

















**forward?**

**We will use the Community Offset Bundle**



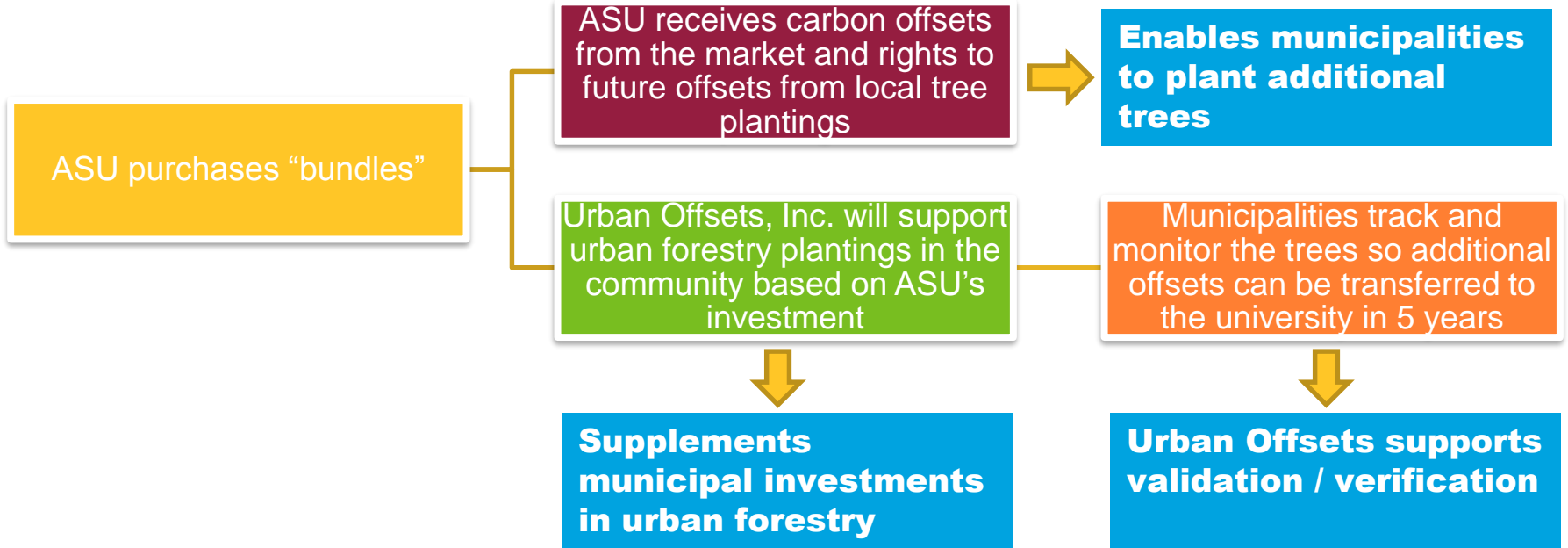
**A Community Carbon Bundle** is a package of verified carbon credits sourced from projects across the country combined with local tree planting projects.

# Why do bundles make sense?

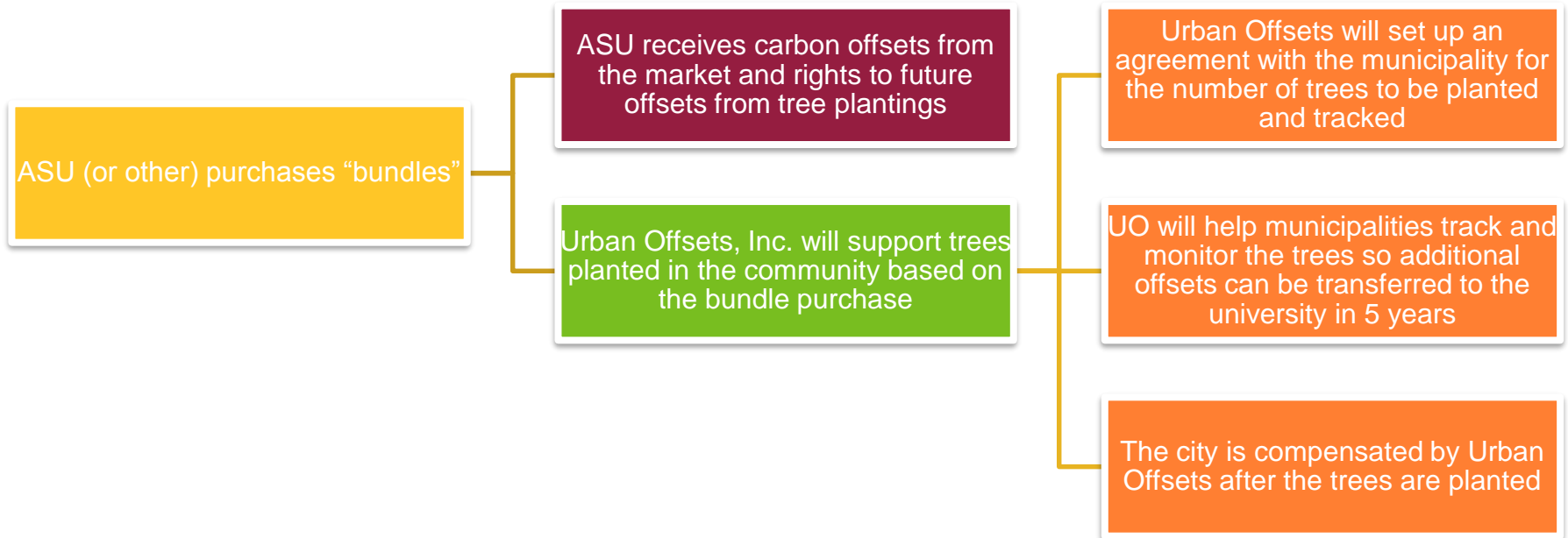
	<b>Carbon Offsets from the Market</b>	<b>Community Carbon Bundles</b>
<b>Education Opportunity</b>	No 	Yes 
<b>Engagement Opportunity</b>	No 	Yes 
<b>Research Opportunity</b>	No 	Yes 
<b>Local, Community Benefits</b>	No 	Yes 
<b>Additional environmental benefits</b>	No (in most cases – just the carbon benefit) 	Yes (reduce heat island, improve shade, etc.) 
<b>Innovative</b>	No 	Yes 
<b>Leverages external partners</b>	No 	Yes 
<b>Supports ASU Charter</b>	No 	Yes 



# How does a bundle work?



# What might a bundle look like to you?



**We are investigating ways to reduce the cost of trees**



**We will continue to pursue partnership opportunities**



**We will continue to develop more education and research oppportunities**



# How can you get involved?

- Participate in Urban Offsets' Community Offset Bundle model
- Support efforts to reduce the cost of trees and irrigation
- Support development and promotion of educational materials
- Participate in validation and verification of Community Offset Bundle plantings

**Thank you!**



**Corey.Hawkey@asu.edu**  
**Steven.Russell@asu.edu**