

# The What, Why and How of Sustainable Audiovisual

April 18, 2012

Green AV webinar series developed and presented by TCO Development and  
Project Green AV



Project  
**Green** AV

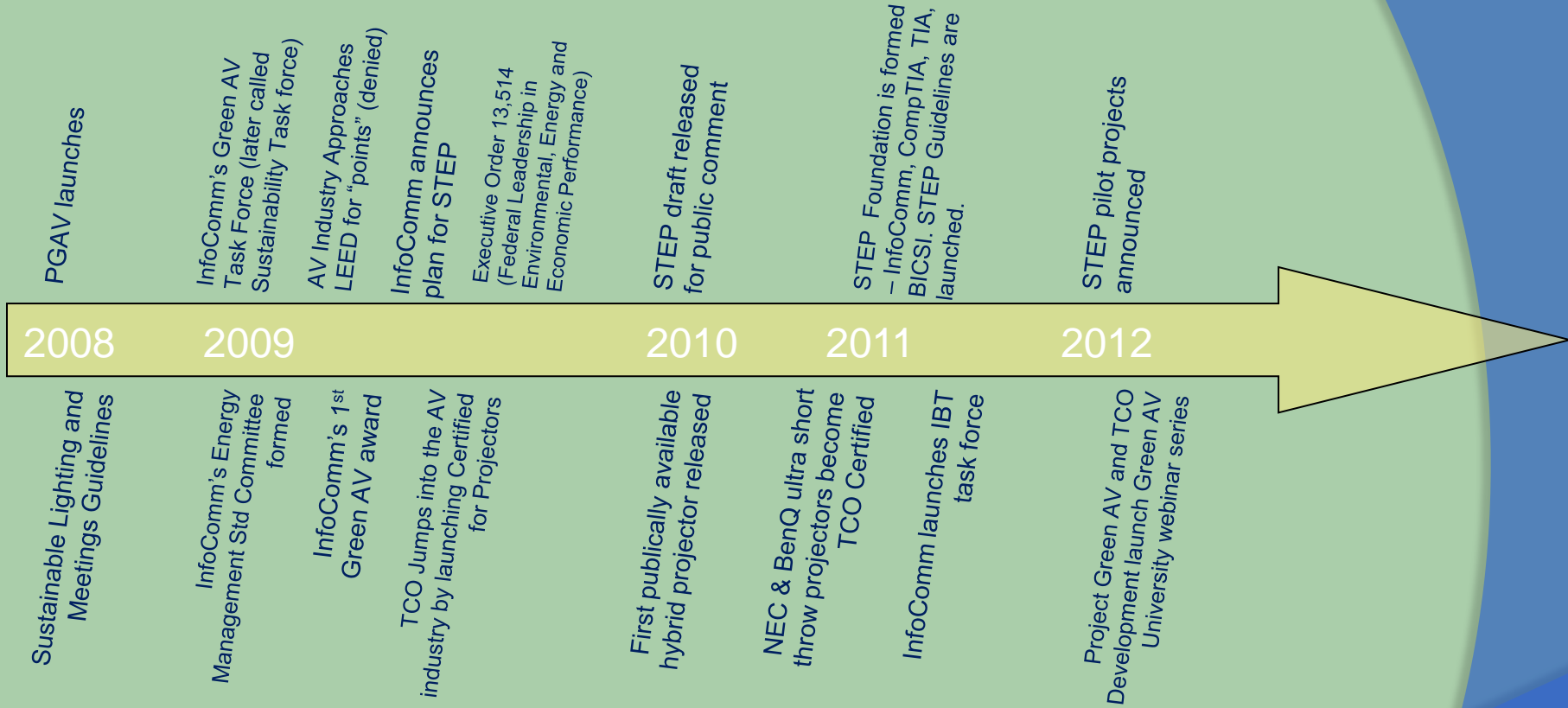
# Welcome to Green AV University

## Today's Speakers:

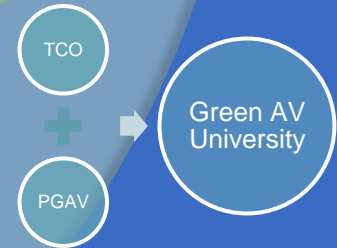
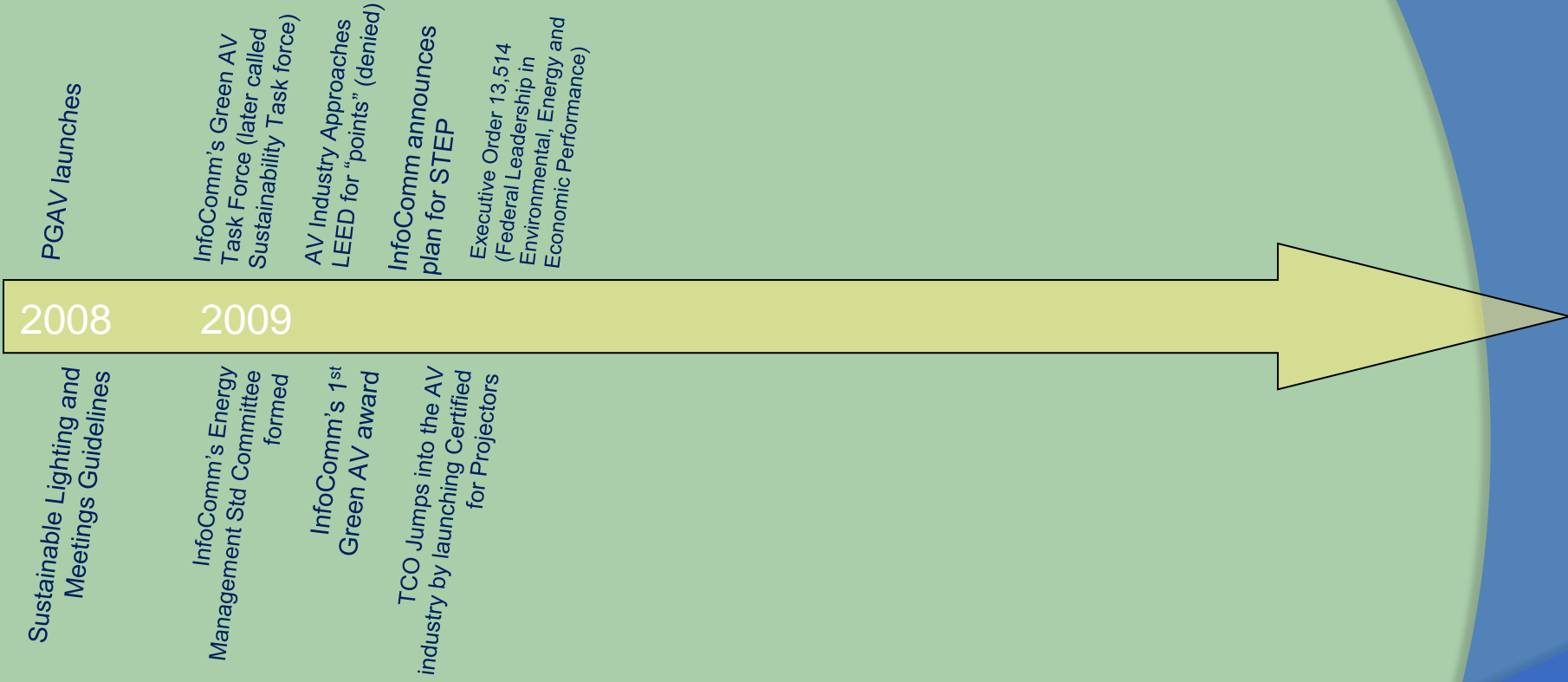
- Gina Sansivero- Director, Project Green AV
- Elizabeth Eames- Project Green AV
- Clare Hobby- TCO Development
- Special Guest Speaker- Billy Lally, LEED-AP-  
Mode Green



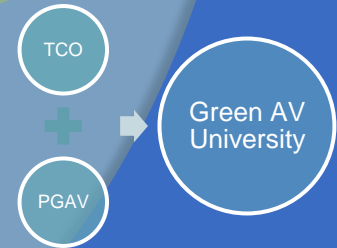
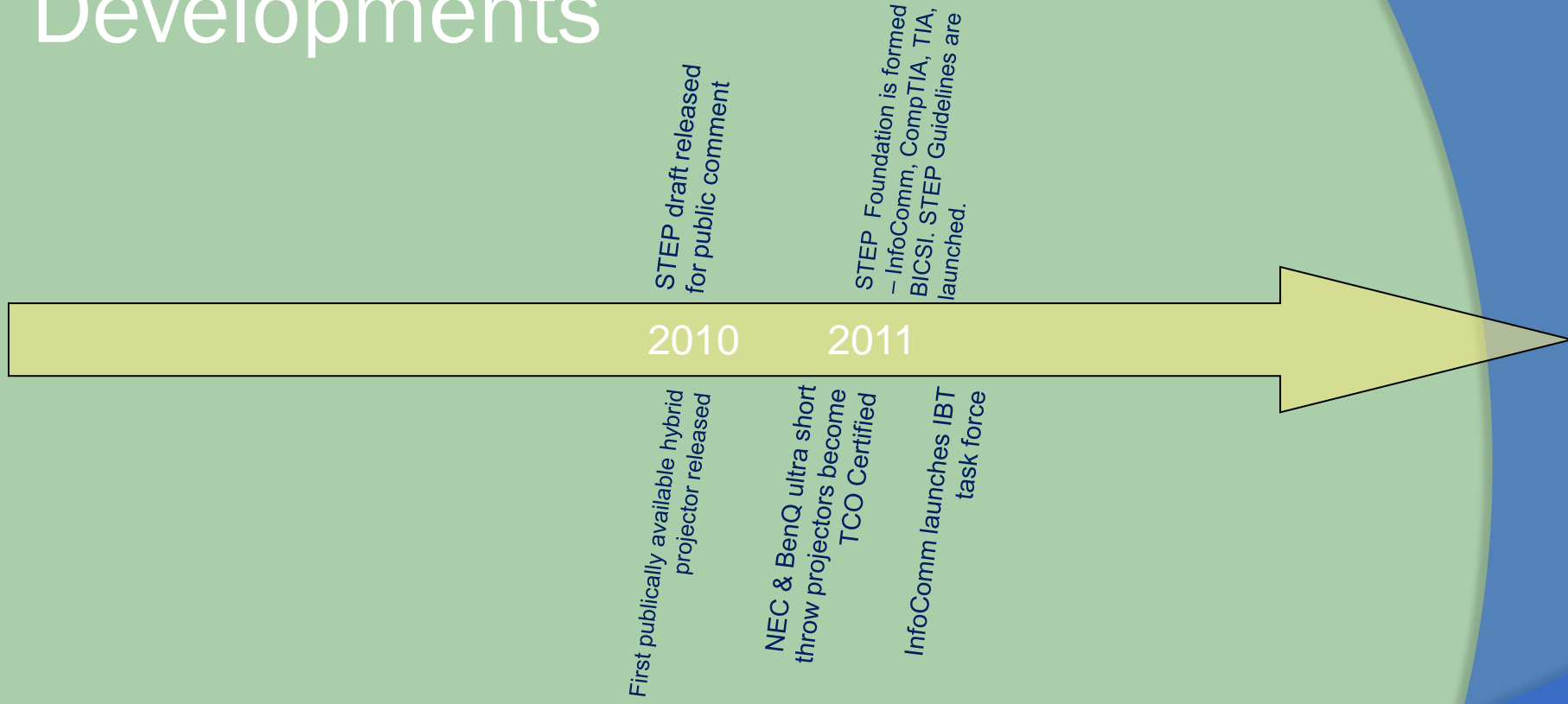
# Green AV Timeline



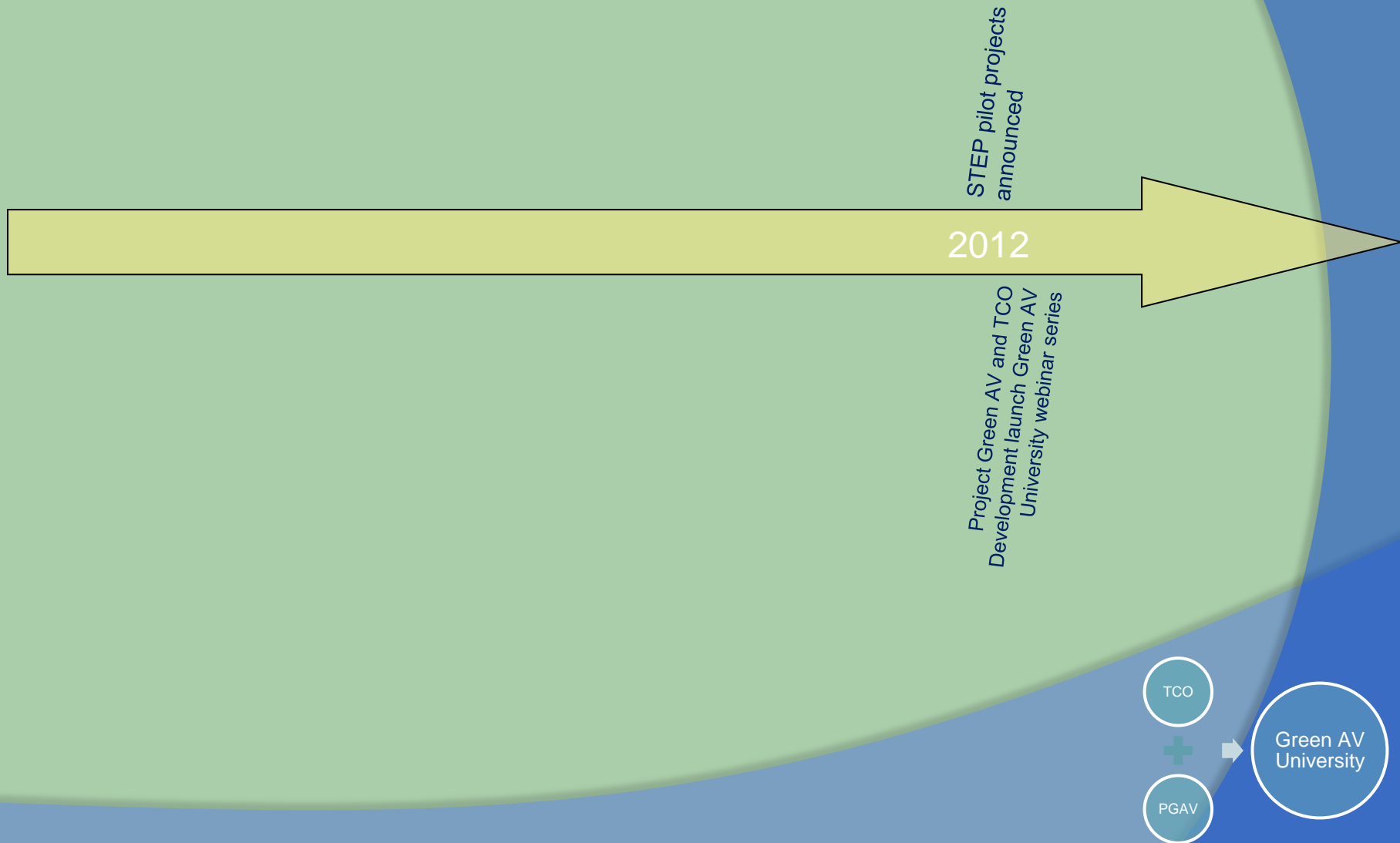
# Green AV Timeline- Early Stages



# Green AV Timeline- Recent Developments



# Green AV Timeline- Into the Future



# Green AV 101: The Basics

## How Do We Understand Green AV?

- Seek information about Green AV
- Collaborate with others
  - Share and learn from Green AV experiences

Project Green AV (PGAV)

[www.projectgreenav.com](http://www.projectgreenav.com)

Making Money in Green AV

[www.projectgreenav.com/pdf/Making-Money-in-Green-AV.pdf](http://www.projectgreenav.com/pdf/Making-Money-in-Green-AV.pdf)

Green AV eBook

<http://avtechnologyonline.com/article/42304.aspx>

TCO Development

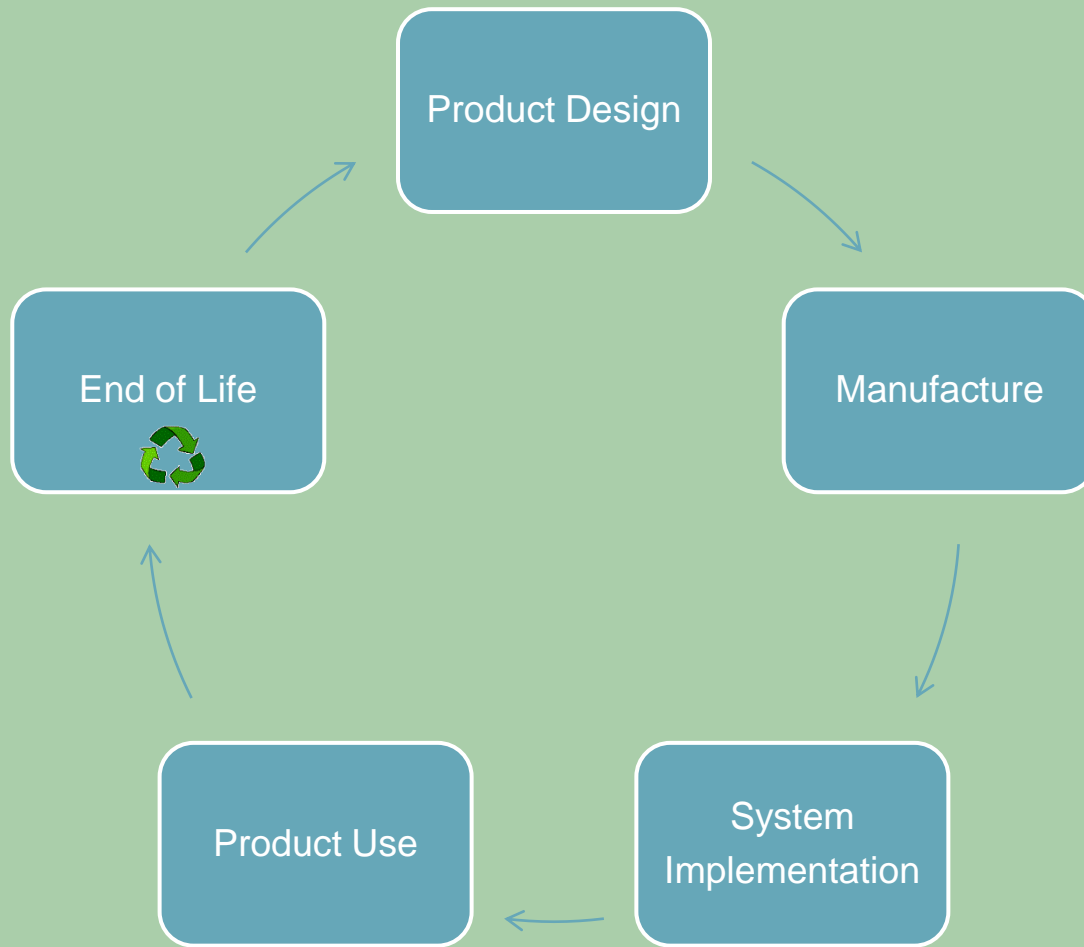
[www.tcodevelopment.com](http://www.tcodevelopment.com)

STEP Foundation

[www.thestepfoundation.org](http://www.thestepfoundation.org)

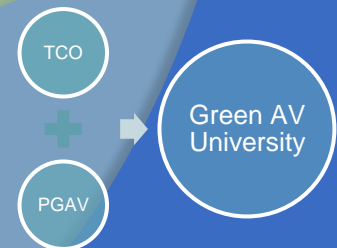


# The Green AV Cycle



*“sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”*

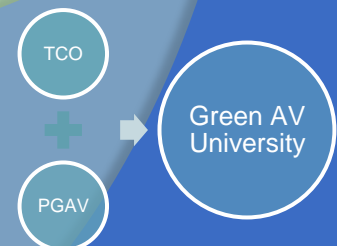
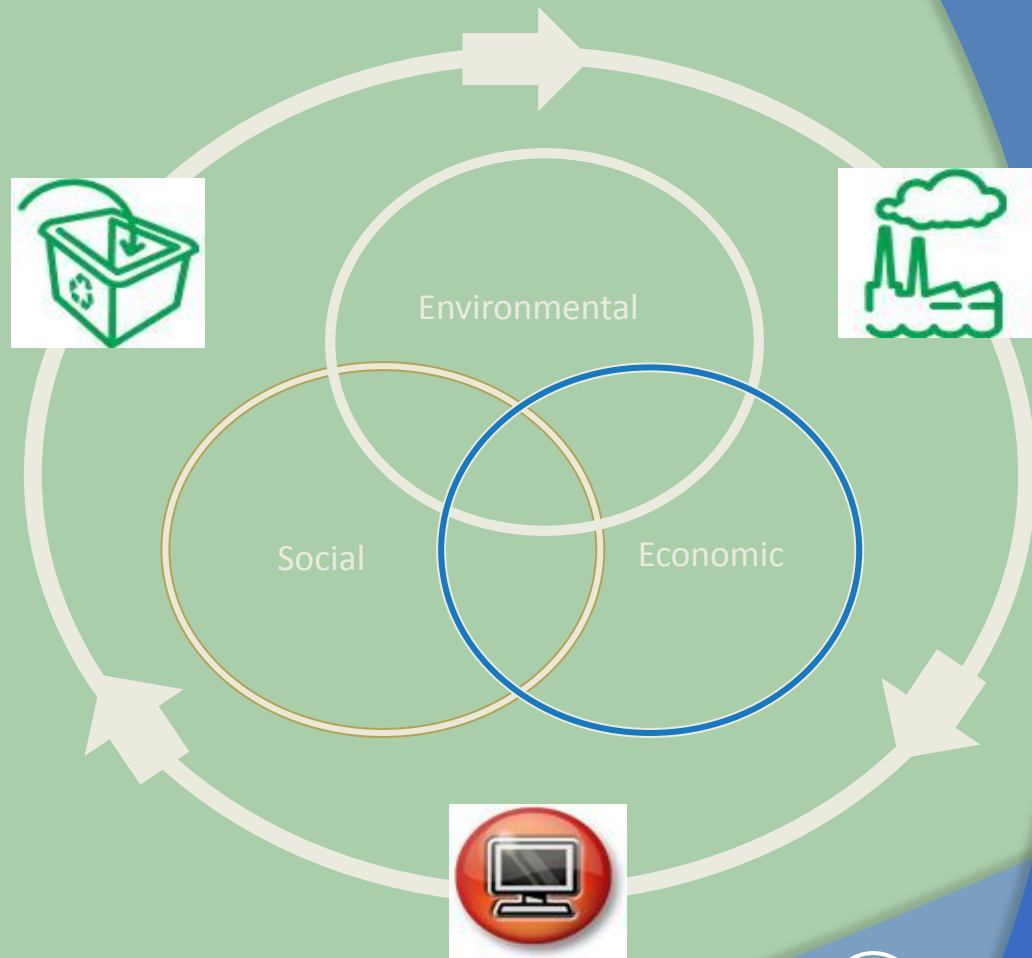
UN Brundtland Commission  
(March 20<sup>th</sup> 1987)





# Green AV vs Sustainable AV: The 3D Cycle

*Sustainability has **environmental, social, and economic dimensions**. This means that taking social and environmental responsibility, gives positive economic effects!*



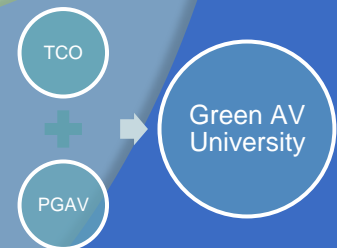
# Green AV vs. Sustainable AV: A Breakdown

## “Green”

- Product Focus
- Environmental attributes
- Energy Efficient
- Low Hazardous substances
- Limiting environmental impact

## Sustainable = “Green” plus...

- Product AND Production
- Environmental, Social and Economic aspects throughout life cycle
- Commitment to socially responsible practices (i.e. working conditions in production, etc.)



# What About Production ?



- Increasing demands from purchasers that products are manufactured responsibly

TCO



PGAV

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# TCO Certified Sustainability Criteria

	<b>Environmental</b>	<b>Economic</b>	<b>Social</b>
<b>Production</b>	<ul style="list-style-type: none"> <li>- Environmental Management</li> <li>- Limit hazardous content in product, packaging</li> </ul>	Workplace health & safety	Working conditions – ILO conventions
<b>Use</b>	<ul style="list-style-type: none"> <li>-Energy Efficiency</li> <li>- Long Product life</li> </ul>	<ul style="list-style-type: none"> <li>-Human-centered design</li> <li>-Durable</li> <li>-Product Safety</li> <li>-Long product life</li> </ul>	<ul style="list-style-type: none"> <li>- Low emissions</li> <li>- Product safety</li> </ul>
<b>End of Life</b>	<ul style="list-style-type: none"> <li>-Recyclable</li> <li>-Limited hazardous substances</li> </ul>	<ul style="list-style-type: none"> <li>-Recyclable</li> <li>- Conserve resources</li> </ul>	<ul style="list-style-type: none"> <li>- Reduce e-waste, human health hazards</li> </ul>



# Manufacturing Challenges

## General

- CSR – continuous improvements of working conditions in production
- Reduce E-waste – increase product life & reuse material
- Find non hazardous flame retardants

## Projectors

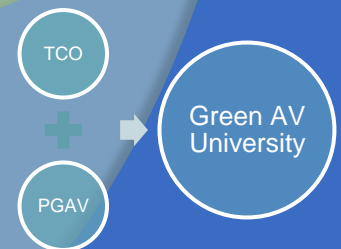
- Increase lumen/Watt
- Reduce energy consumption in network standby
- LED w high light output

## Displays/TV

- Increase energy efficiency in backlight & high picture performance
- LCD displays - limit fluorinated greenhouse gas emissions (F-GHGs)
- Increase performance in LED backlight

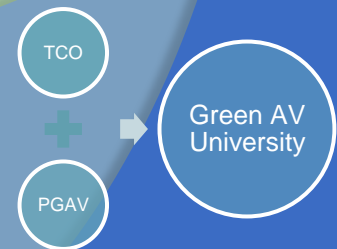
## Portable products

- Battery with high efficiency



# Sustainable AV- Design & Implementation

- Manufacturers- responsible supply chain; green manufacturing processes; green business processes
- Products- design; life cycle; energy use; refer to TCO Criteria
- Programming- energy management; accessible remotely; scheduling capabilities
- End of Life Products- manufacturer reclamation; e-cycling programs ([www.projectgreenav.com/pgavrecycles](http://www.projectgreenav.com/pgavrecycles)); donations
- Internally- don't forget your business' own green business initiatives; practice what you preach/ sell



# Sustainable AV- ROI

## Networking & Remote Management

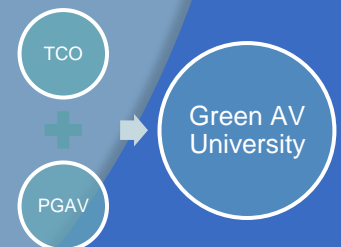
- Networking & Remote Management
- Efficient Products, Networked Efficiently
- Reduces energy costs in buildings
- Reduces environmental and financial costs of travel
- Maximizes AV technology to mitigate environmental impact and cost

## Energy Management & Building Control

- Power/energy consumption savings
- HVAC
- Utility Savings

## Products & Cost of Ownership

- Efficient Products
- Lifecycle Management & Longer Lifecycle



# Bill Lally, LEED- AP- Mode: Green



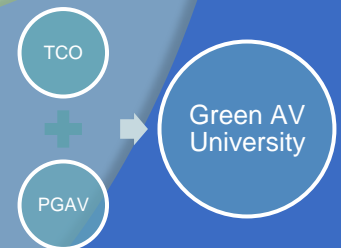
## Selling Green AV

### Common Misconceptions:

Green AV is going to cost more money

I need a lot of additional equipment

The user experience is not going to be the same



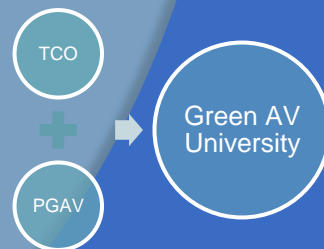


# Bill Lally, LEED-AP, Mode: Green



## Constraints/ Challenges when implementing Green AV Systems

- Being aware of the environment
  - Lighting Control / Projection
- Being aware of new opportunities/ regulations
  - New “Energy Star” Rated components
  - Practical Use
  - Power Save Mode Challenges
    - Amplifier Shut Down
    - Digital EDID / HDCP Issues



# Bill Lally, LEED-AP- Mode: Green



## Calculating and Communicating ROI

- Normal Use Modes
  - Hour of Use / Condition of Use
  - Realistic Estimates



- “Snow Ball” effect into other savings areas
  - Projector Lamp Life
  - Reduced HVAC Heat Load
  - Room Lighting Life
  - Room Aesthetics



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# Share your Green AV Stories & Products



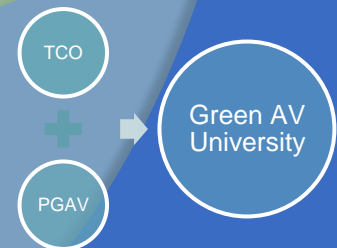
Do you have any Green AV installations, products or ideas you want to share?

Send them to PGAV at:  
[info@projectgreenav.com](mailto:info@projectgreenav.com)



Do you manufacture ProAV projectors or displays which you would like considered for TCO Certification

Contact TCO Development at:  
[development@tcodevelopment.com](mailto:development@tcodevelopment.com)

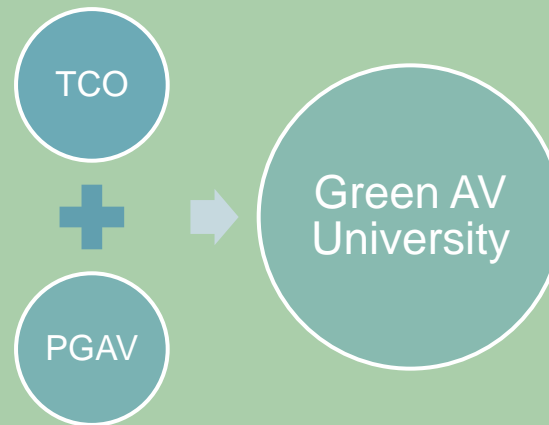


# Thank you!

If you have any questions about Green AV or Sustainable AV, please contact us.

Stay tuned for information about our next webinar in the Green AV University Webinar Series.

Green AV webinar series developed and presented by TCO Development and Project Green AV



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