

Community College and Industry Partnerships: Real Jobs in the Clean Economy, PART II

Webinar: 9/27/12





SEE



Welcome to the webinar!



Submitting Questions: Open Chat

Drop-Down Menu



- To submit a question, type the question in the **text field** and press your **Enter/Return** key.
 - Please enter the name to whom the question is directed.
- To send questions only to the presenters, select **Presenters** from the **drop-down menu** before pressing your **Enter/Return** key.
- Change **Text Size** and **Chat Color...**

Text Field

- Community college and industry partnerships have always been critical to the success of workforce programs
- In the greening economy these partnerships take on a whole new meaning

Webinar Part I: The “What”

- Georgia Piedmont Technical College & Kele Corporation (& a host of Fortune 500, small suppliers in the building automation & controls industry)
- Model
 - Defining skill needs
 - Continuous employer engagement
 - College as *convener*
 - Outcomes for students, employers, and college
 - Adaptable to green and traditional sectors

Webinar Part II: The “How”

- Brian Lovell, Director, Green Technology Academy, Georgia Piedmont Technical College
- Dave Weigel, Kele Corporation and Managing Member – The Watt Doctors, LLC



- Founded 1961
- 12,000 students / 4,000 Diploma or Degree–Seeking Students
- Technical College System of GA (TCSG)
- Serves 4 Metro Atlanta Counties
- President: Dr. Jabari Simama

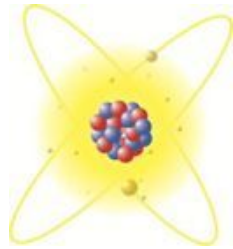
Building Productive Industry Advisory Boards (Outline)

- Industry Background
- (3 programs created – focus on Building Automation)
- Timeline of Program Development at GPTC
- Building and Maintaining Active Industry
- Advisory Boards
- Outcomes

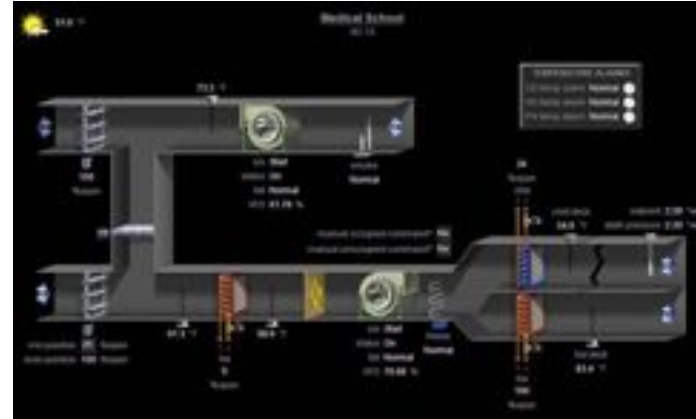
Industry Background – Building Automation



- Dave Weigel, P.E.
 - Consultant
 - Managing Member – The Watt Doctors, LLC
- Building Automation Peripherals Supplier
- Hub of Building Automation Industry



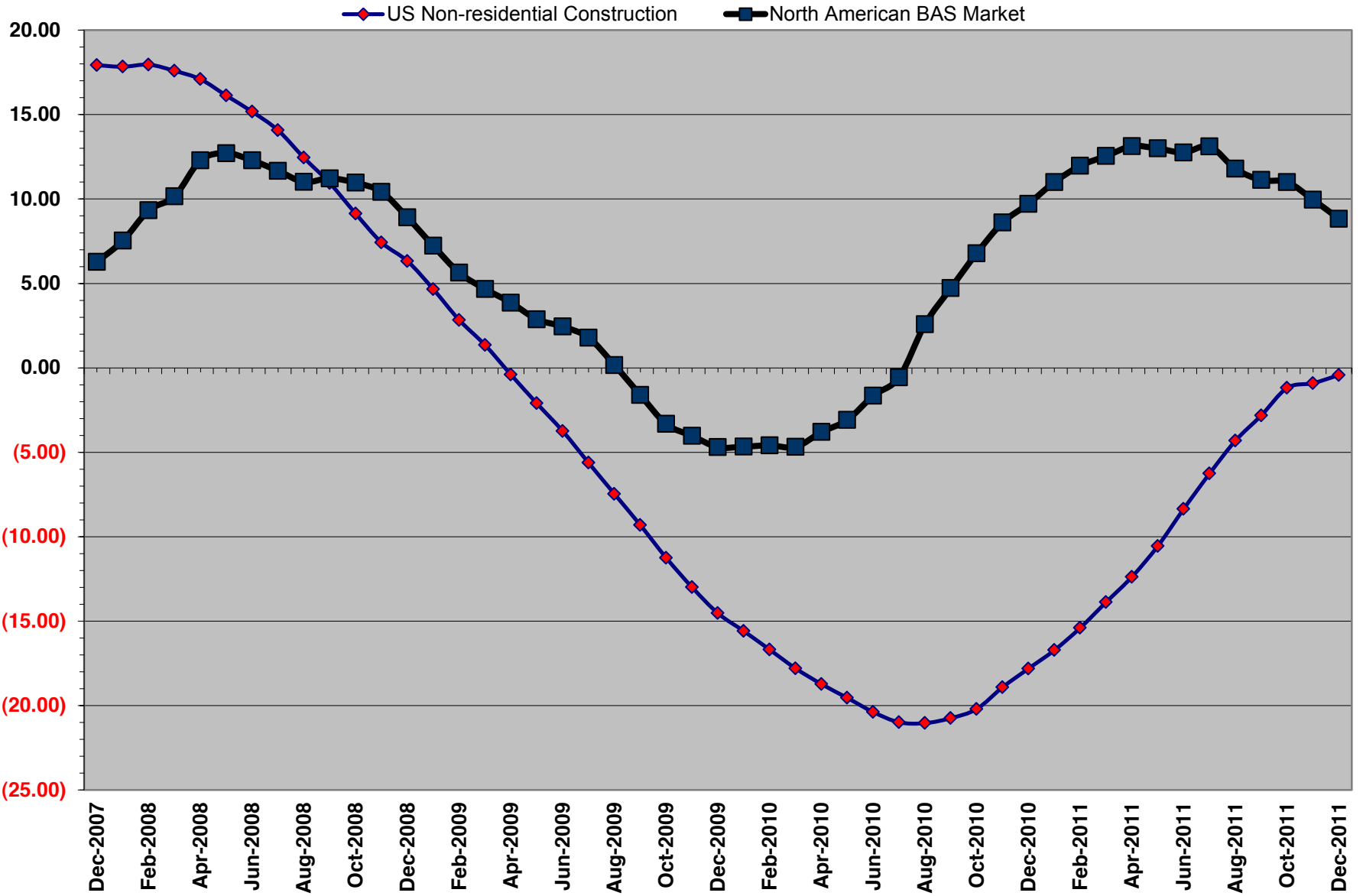
Industry Background – Building Automation



Industry Background – Building Automation

- Industry Outlook – Green Jobs? Yes!
- Internal Estimates
 - U.S. Market - \$5 Billion 2012
 - World Market - \$15 Billion 2012
- Recession Resistant
 - 2002 Recession – Plus 1 % vs. Construction Down 15%
 - 2008 Recession – Down 5% vs. Construction Down 23%
 - Forward – Double-Digit Annual Growth, Starting Now

Building Automation Market Growth Versus Non-Residential Construction Growth (Trailing Twelve Month Averages)



Industry Background – Building Automation

Drivers

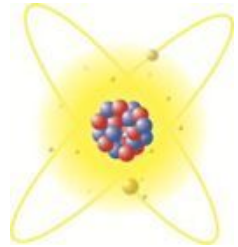
- Energy Costs
- Environmental Awareness
 - LEED / Energy Star / Others
- Building Codes
 - International Energy Code
 - ASHRAE 90.1-2010 / ASHRAE 189.1-2011

Employment

- Demand Matches Industry
- Specialized Construction
- No Labor Economies of Scale
- No Trained People to Hire...



- Brian Lovell
 - Director – Green Technologies Academy Building Automation Systems Program
 - Managing Member, The Watt Doctors, LLC
- Career Spent in BAS Industry
 - Founder – Synergy Automation, Inc. (1998)
 - Dearth of Trained BAS Technicians
- Joined GPTC Summer, 2007



Timeline of Program Development

June, 2007

New hire at GPTC as
Air Conditioning
Instructor with
mission of creating
new, innovative
programs, starting
with Commercial
Refrigeration

Timeline of Program Development

August, 2007

“Vision for the Future” meeting with President, VPs, Deans, and Division Chair

June, 2007



Timeline of Program Development

Fall, 2007

Commercial Refrigeration program development & subsequent approval by the TCSG system

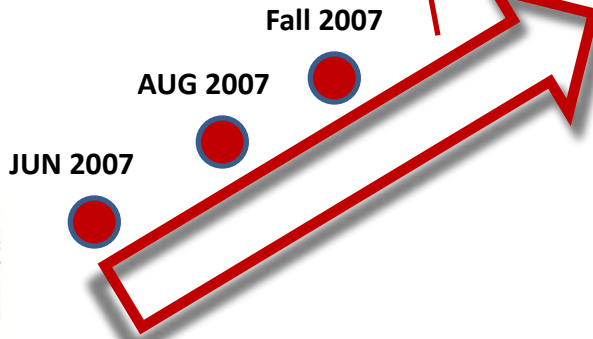
AUG 2007

JUN 2007

Timeline of Program Development

Late Fall, 2007

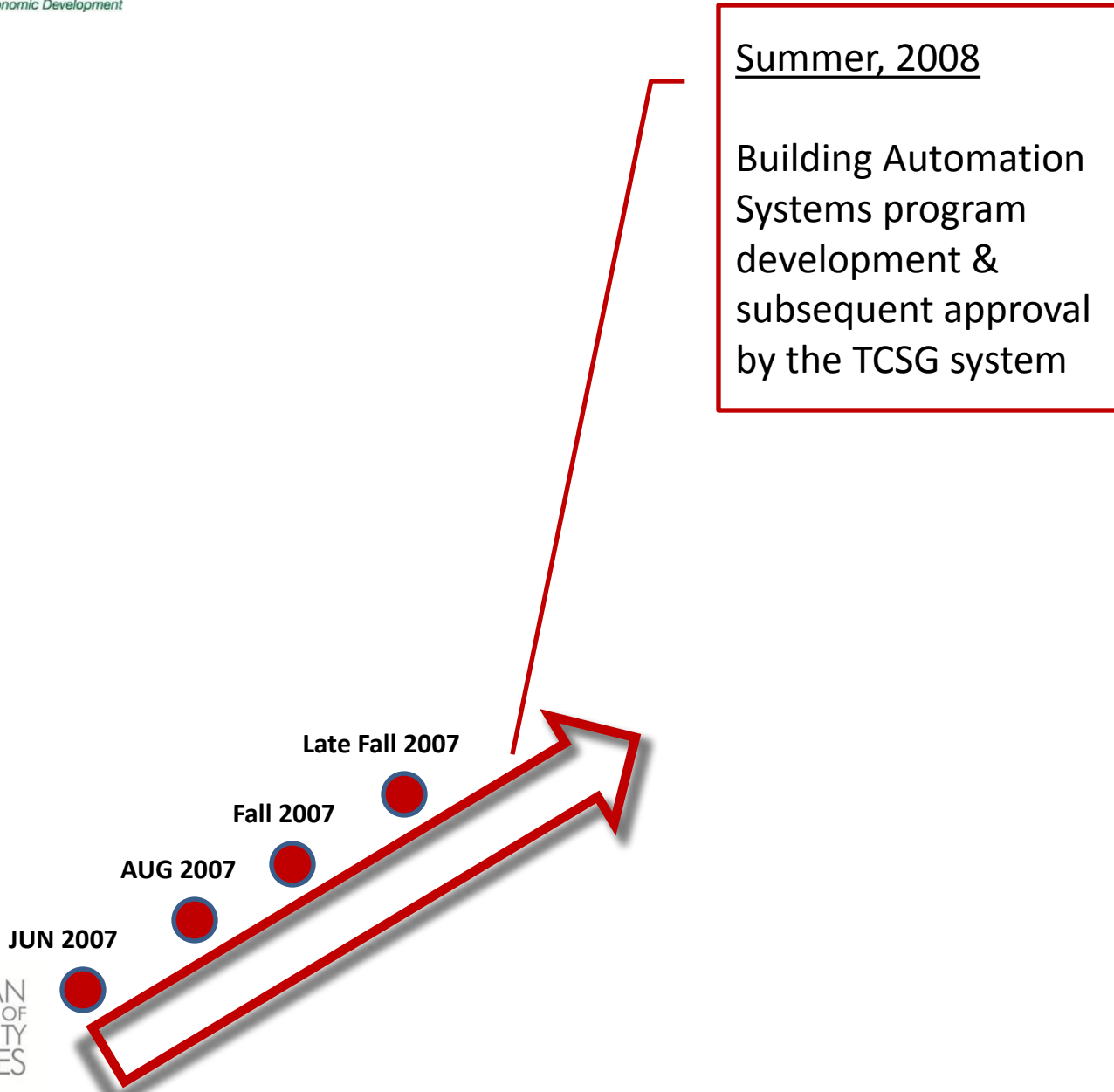
Commercial
Refrigeration
Advisory Board
established



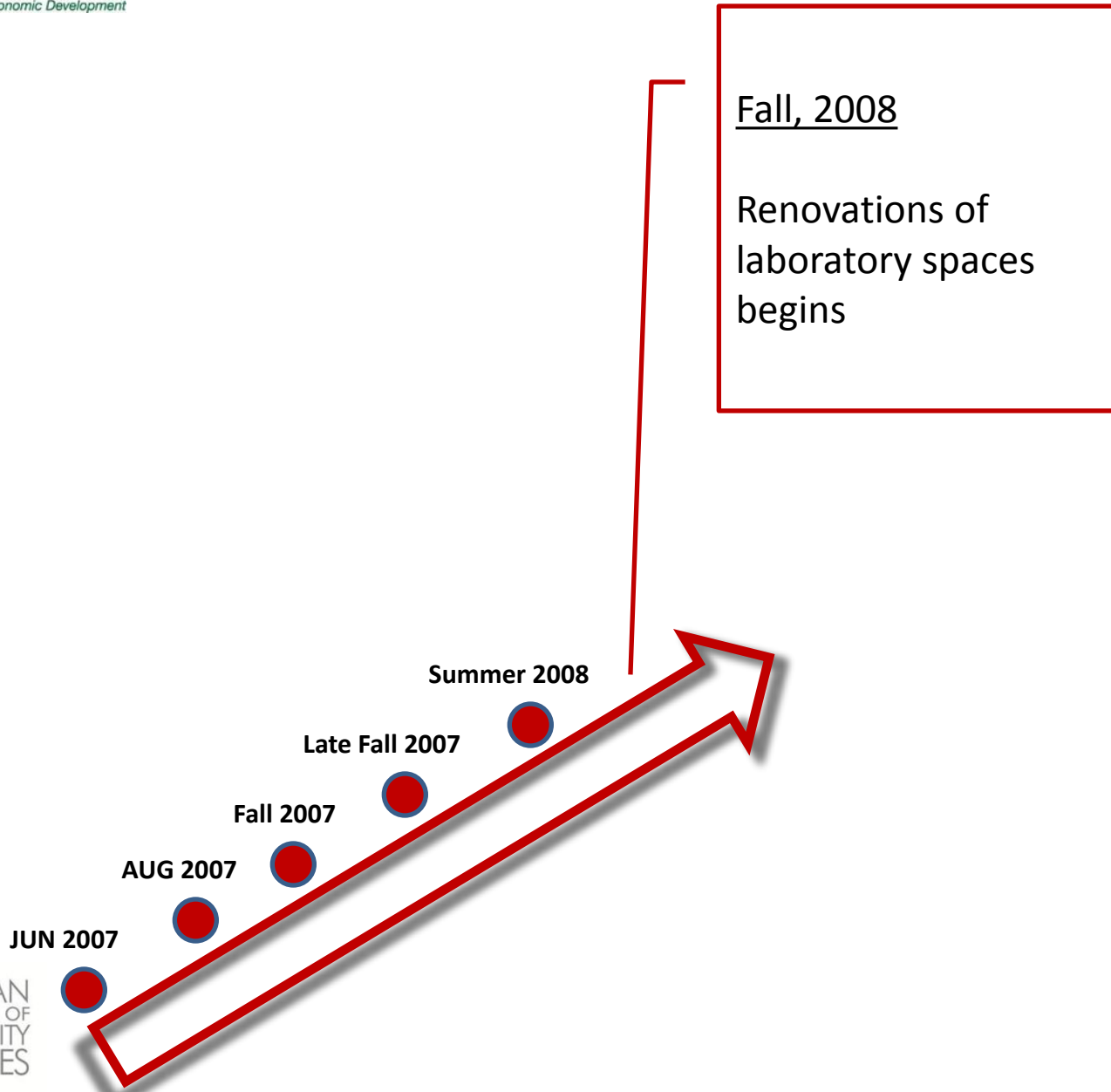
GPTC's Commercial Refrigeration Advisory Board



Timeline of Program Development



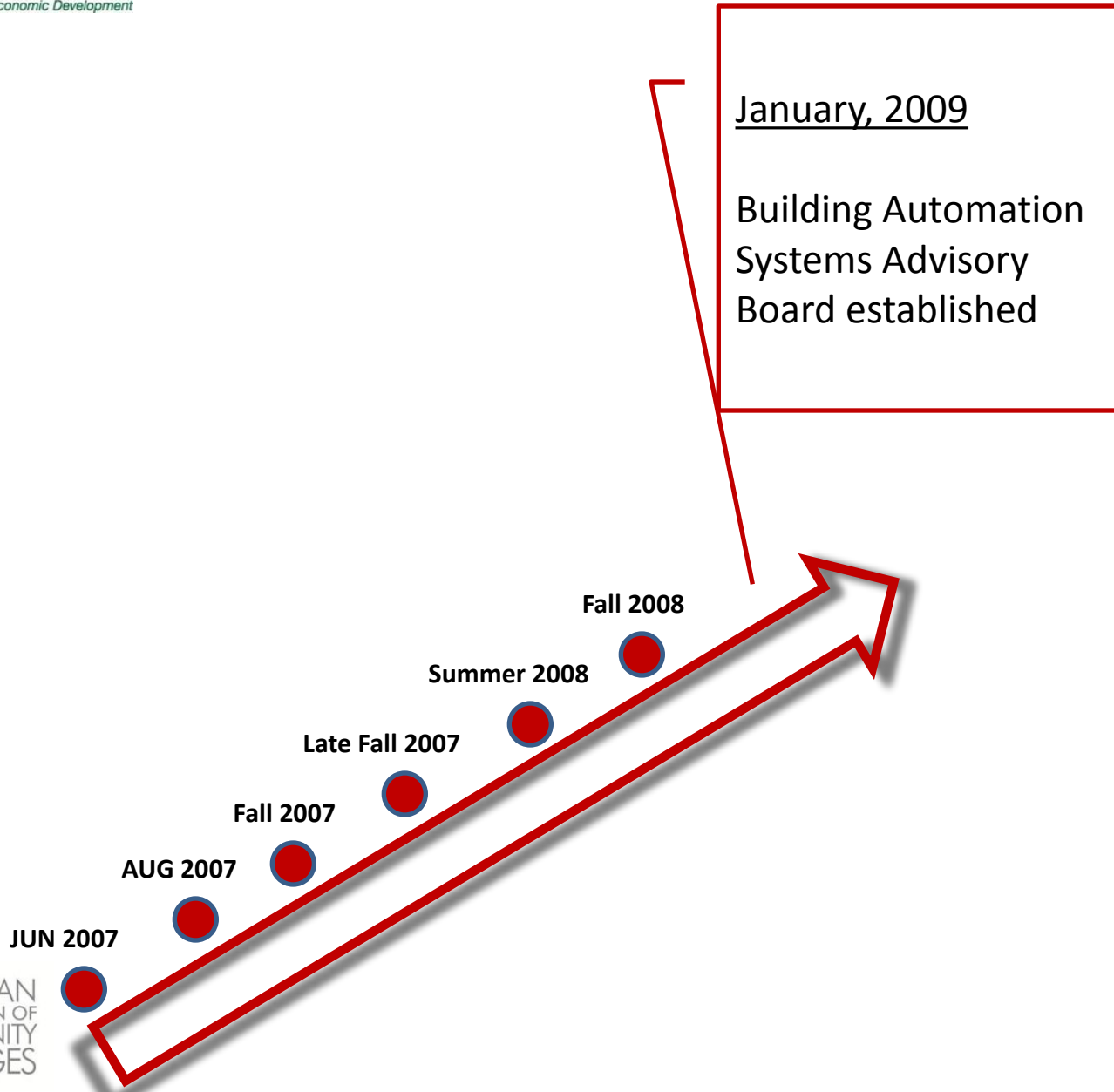
Timeline of Program Development



Fall, 2008

Renovations of
laboratory spaces
begins

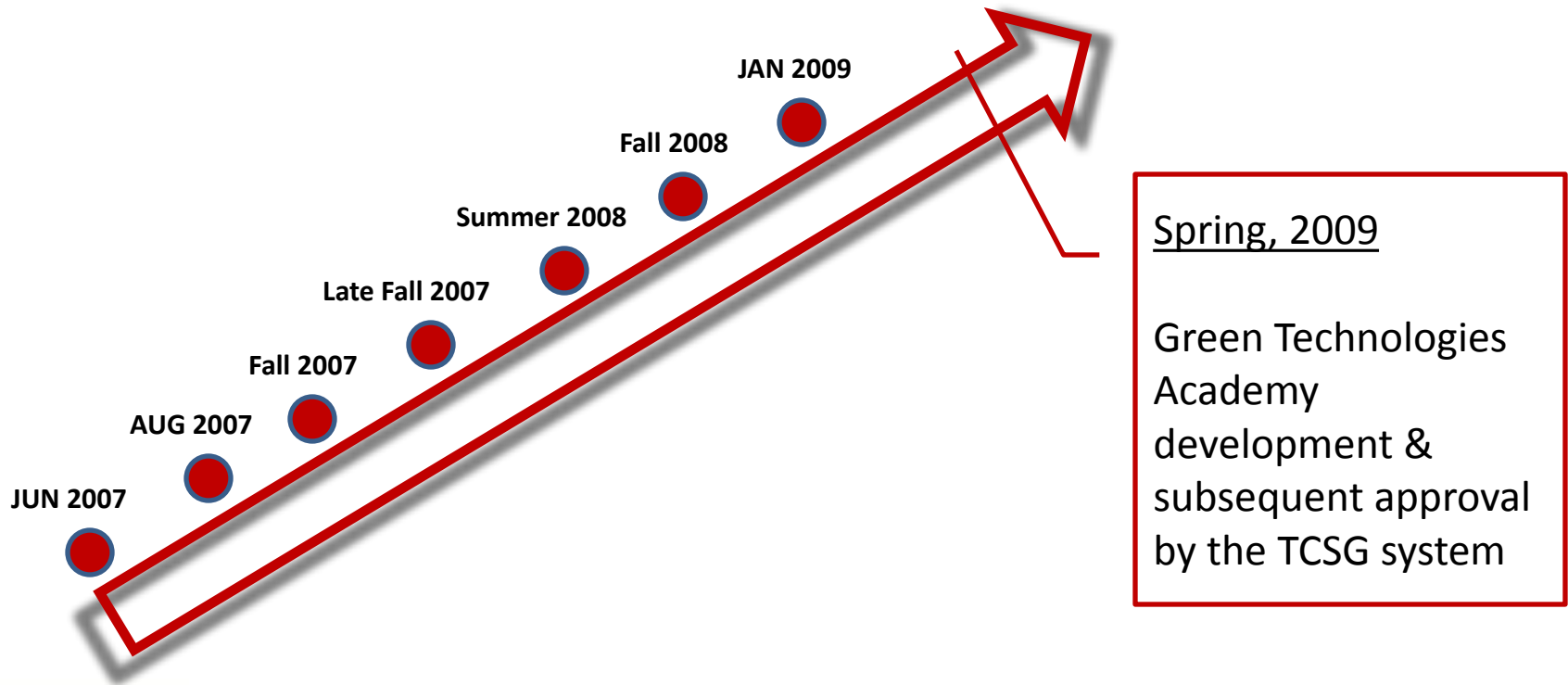
Timeline of Program Development



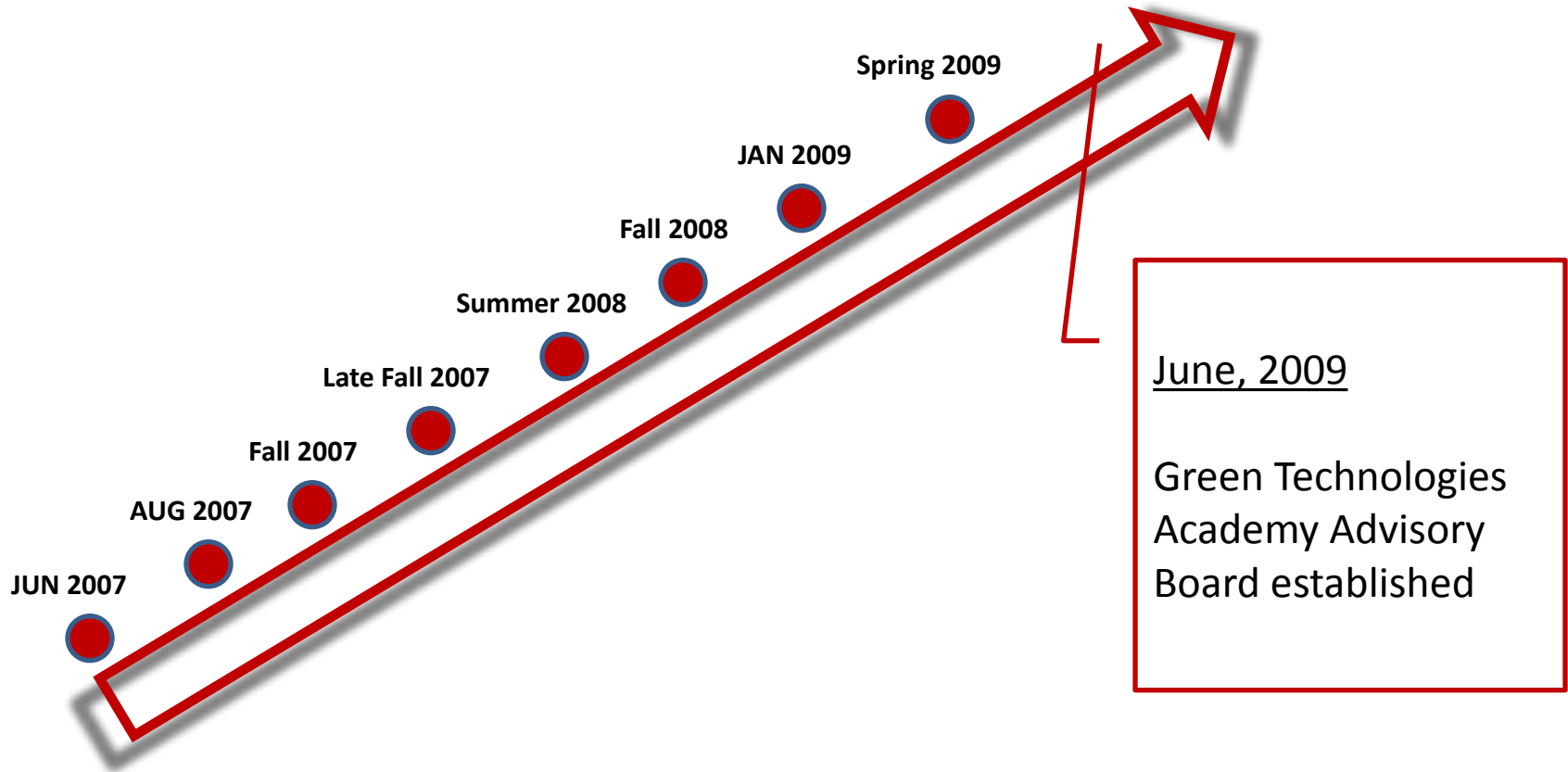
GPTC's Building Automation Systems Advisory Board



Timeline of Program Development



Timeline of Program Development



June, 2009

Green Technologies
Academy Advisory
Board established

GPTC's Green Technologies Academy Advisory Board



INDUSTRY PARTNERS

Aspen Controls

Akron

Atlanta Refrigeration Service

Automated Logic Controls

Billy Cookers

Blair Compressors

Bobo

Carlisle Compressors

Commercial Controls of Georgia

—MightyMart's

Dallas America

Debius

Della Controls

DHR Mechanical & Electrical

Elmich Controls

Evansville Electric

Fairfax

Florida State University

Florida Refrigeration

George Fisher Air-Piping

Georgia Piedmont College

Georgia Power

Georgia State University

Georgia Tech

Hart & Kirby

HIGHTCRAFT

HILL-Thomas

International Quality Products

Johansen Controls

Kuhn

Laboratory & Research Systems, Inc.

Larkin

Machley Industries

Procter / Sperlan

Reel Electrical & Electronic Supplies

Seimens

Seimens

Southwest Controls

Tenneco Cooks

Tranck, S. S. C.

Union Systems

United Refrigeration

Vacuums Planting Systems

Vitacore

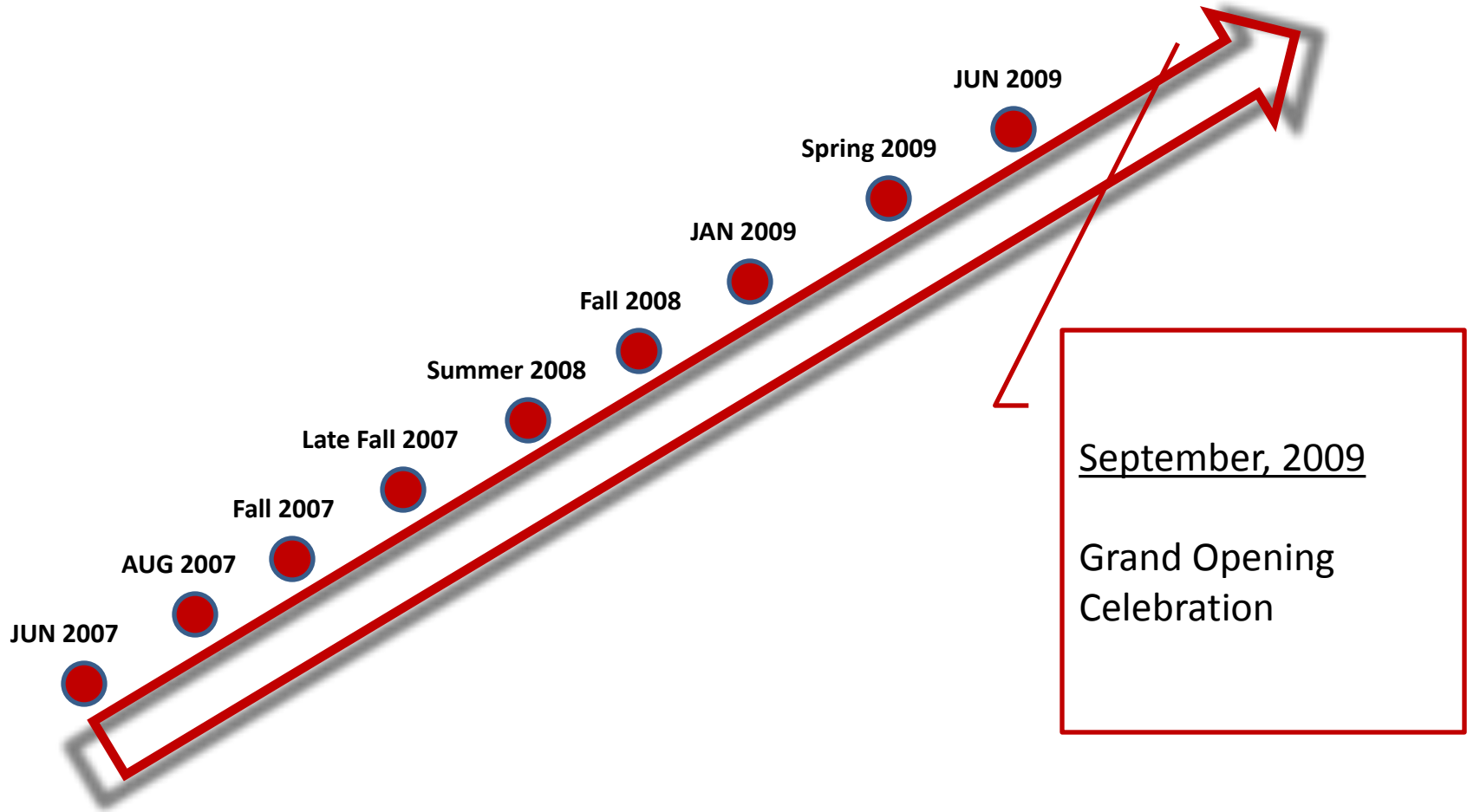
Waggoner Systems

Webster - Joining Technologies

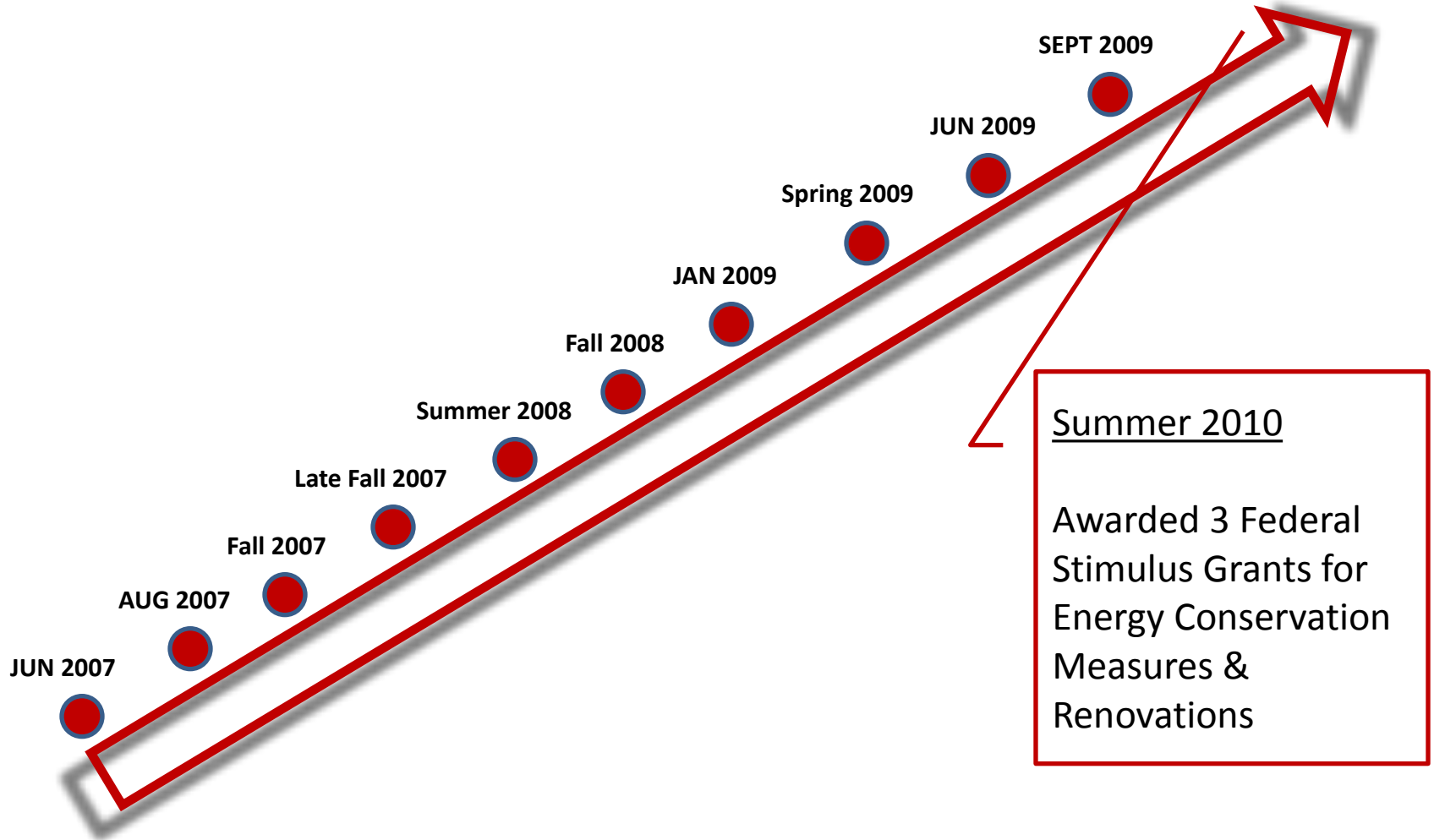
Wright Brothers



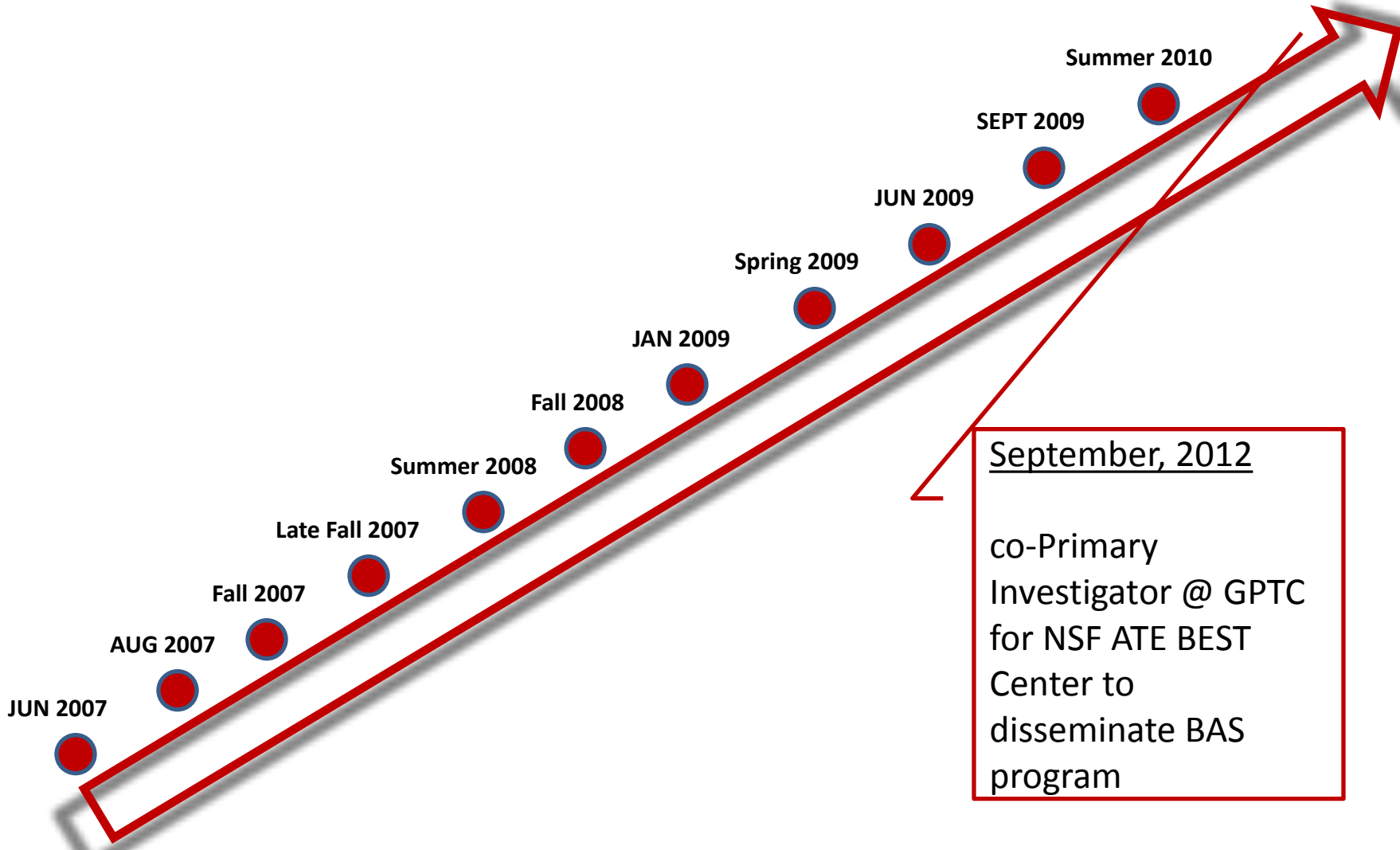
Timeline of Program Development



Timeline of Program Development



Timeline of Program Development



September, 2012
co-Primary Investigator @ GPTC for NSF ATE BEST Center to disseminate BAS program

Building and Maintaining Active Industry Advisory Boards

3 Models of Development

- Commercial Refrigeration
 - Externally-driven
- Building Automation
 - Internally-driven
- Green Technologies Academy
 - Jointly-driven

Building and Maintaining Active Industry Advisory Boards

Commercial Refrigeration

- Industry-developed advisory board largely due to efforts of well-connected individual (Refrigeration Manager of large supply chain)
- Leadership came primarily from the advisory board – No one at GPTC with significant industry experience
- Tremendous support for vision (In-kind donations primarily)
- Coordination, management, and implementation primarily from within GPTC

Building and Maintaining Active Industry Advisory Boards

Commercial Refrigeration

- Approximately 20 industry partners
- Hundreds of thousands of dollars in in-kind donations and some cash donations
- Review of curriculum
- Design of laboratory facilities
- Guest lecturers
- Internship agreements

Building and Maintaining Active Industry Advisory Boards

Building Automation

- GPTC-developed advisory board
- Leadership came primarily from within the college – Industry experience was present at GPTC
- Tremendous support for vision (In-kind donations primarily)
- Coordination, management, and implementation primarily from within GPTC

Building and Maintaining Active Industry Advisory Boards

Building Automation

- Approximately 20 industry partners
- Hundreds of thousands of dollars in in-kind donations and some cash donations
- Review of curriculum
- Design of laboratory facilities
- Guest lecturers
- Internship agreements

Building and Maintaining Active Industry Advisory Boards

Green Technologies Academy

- GPTC-developed advisory board
- Leadership was equally evident from industry and GPTC
- Tremendous support for vision (Evidenced by participation and donations of time and energy)
- Coordination, management, and implementation primarily from within GPTC

Building and Maintaining Active Industry Advisory Boards

Green Technologies Academy

- Approximately 15 industry partners
- Review of curriculum
- Design of laboratory facilities
- Guest lecturers
- Internship agreements
- In-kind donations (Not nearly as much)

Building and Maintaining Active Industry Advisory Boards

Common Threads Linking the Advisory Boards

- Early establishment of a vision
- Strong leadership (Internally / Externally)
- Benefits and motivating factors discussed early & often
- Careful attention to selection of members & close monitoring of board dynamics

Building and Maintaining Active Industry Advisory Boards

Maintaining Productivity

- Continually ask “What is it that will keep each company engaged?” **Answering this question and providing opportunities for your board members goes a long way towards maintaining productivity.**
 - Commitment to industry
 - Source of new employees
 - Professional development
 - Opportunity for publicity
 - Opportunity for sales to the college
 - Keeping an eye on competition
 - Training for current employees
- Have a detailed, updated program of work and have regular meetings (At least one per quarter)

Building and Maintaining Active Industry Advisory Boards

Questions to Answer if You Want an Active Board

- Where will the leadership and energy come from on the board?
- What are my goals for the board and do I have a reasoned approach to attain them?
- Will my college be able to keep the board engaged and productive and provide the benefits the board members are looking for?
- Who at my institution will be responsible for managing the board?
- What type of advisory board should we strive for?
- (Internally led / Externally led / Jointly led)
- Is there a clearly defined programmatic or collegiate vision the board can buy into?

- 1st Associate's of Applied Science Degree
- Program for BAS in U.S.
- True Industry / Education Partnership
- Multi-Million Dollar Laboratory (Majority of Equipment Donated by Industry)
- Use of Facilities as Living Laboratories
- Collaborations with Other Colleges
 - Articulation with 4-year College
- New Revenue Stream for College

- Student Placement
 - 75% in-field
 - Average over \$50,000.00 starting pay
- 400% Growth in Student Count in Program Areas in
- first 2 ½ years ***
- New, Innovative Collaborations Beneficial to Students
- Continued High Level of Industry Involvement

*** - Program count temporarily down

- National Science Foundation ATE Center (2012)
 - Laney College, San Francisco (Lead institution)
 - UC Berkeley National Labs
 - Milwaukee Area Technical College
 - Georgia Piedmont Technical College
- Retrofit of 30,000 sq. ft. Facility Level 3 Energy Audit/ECMs / Implementation by Students





New Report! Green Genome

How to integrate green WFD and sustainability into the college's DNA

Including free self-assessment!

Release: October 1 at
www.theseedcenter.org



Green Genome Awards

**Congratulations
Community College
Winners!**

Read About the Awards



Questions?