



Gateway Park



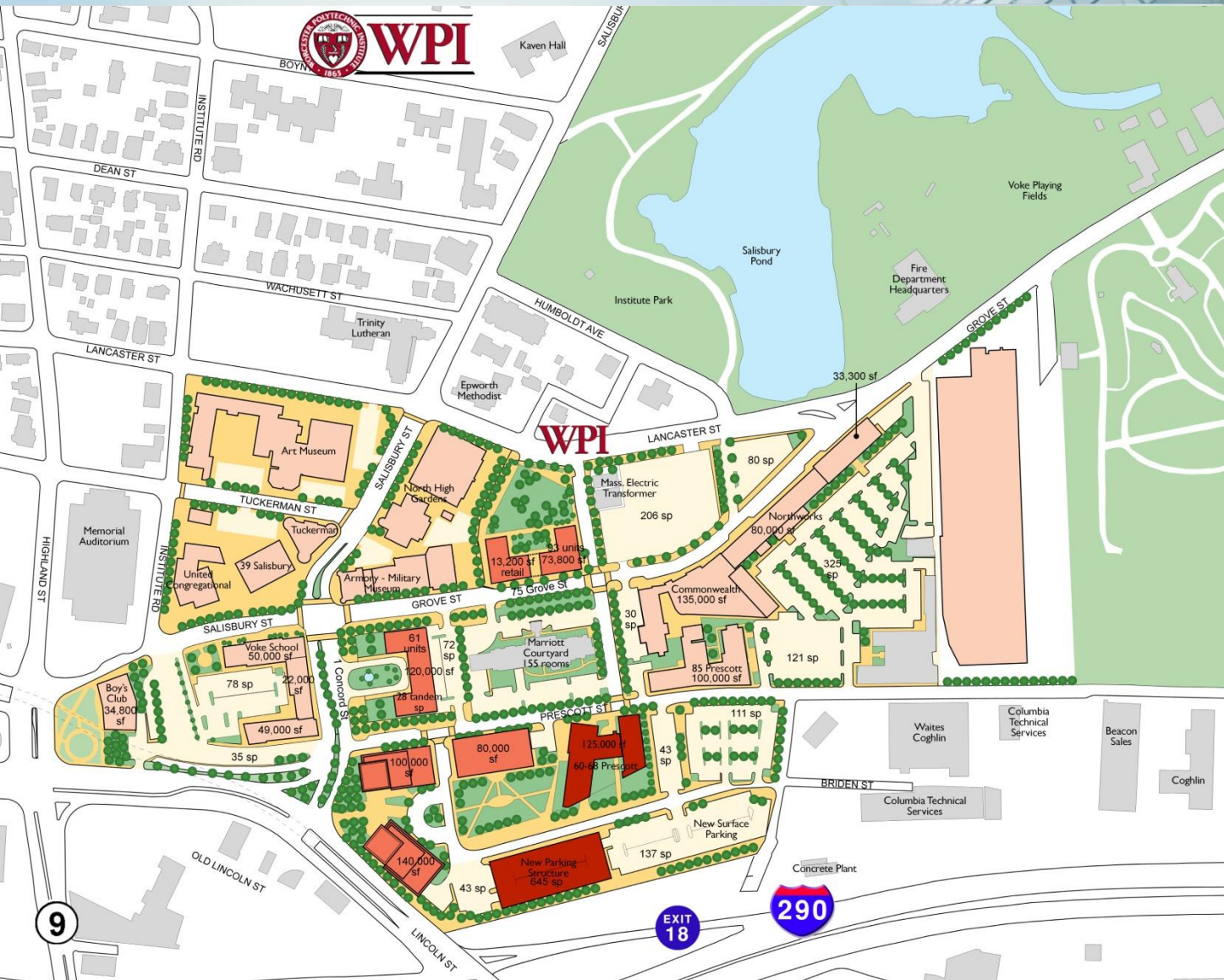
About WPI



- Founded in 1865 by industrialists who recognized the need for a more highly-skilled work force
- WPI offers over 50 graduate science, engineering and management programs *plus* over 60 professional development offerings
- Multidisciplinary approach to education
- Strong foundation in teaching industry applicable material
- Part-time MBA ranked #1 in the NE by Business Week; #9 in the country

BusinessWeek

The Gateway District

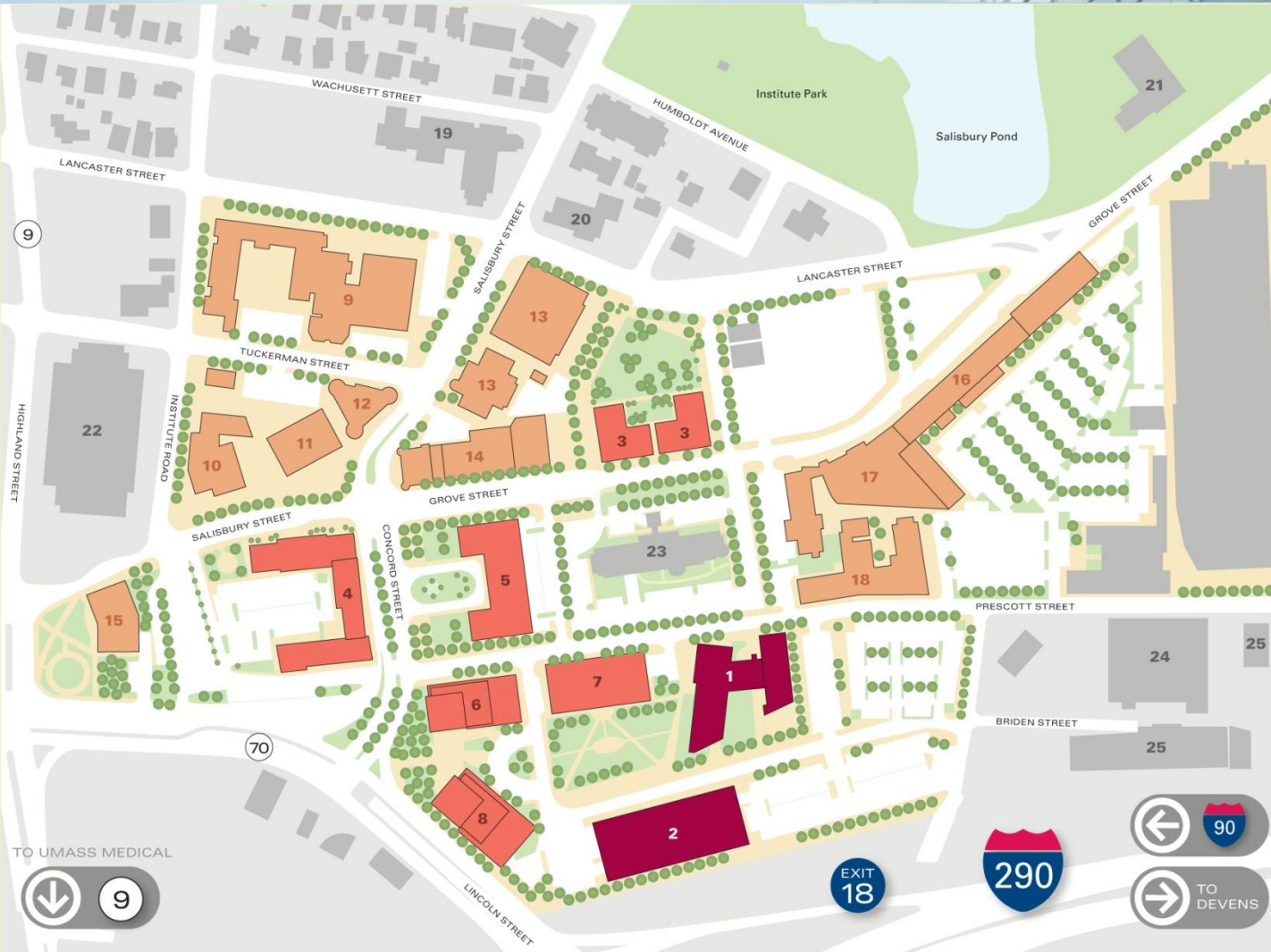


*Gateway Park,
LLC*

*Joint venture
between WPI
and Worcester
Business
Development
Corporation
(WBDC)*

*Plan for the
Overall 55-acre
Gateway District
Development and
its vicinity*

A closer look...



Completed Structures

1. The WPI Life Sciences and Bioengineering Center
2. Parking garage (660 spaces)

Next Phase

3. Retail space/graduate housing
4. Loft condominiums with adjacent parking
5. Market-rate condos/commercial space with adjacent parking
6. Commercial space available (100K sq. ft.)
7. Commercial space available (80K sq. ft.)
8. Commercial space available (140K sq. ft.)

Surrounding District

9. Worcester Art Museum
10. United Congregational Church
11. Medical office building
12. Tuckerman Hall
13. North High Garden Condos
14. Massachusetts National Guard Military Museum
15. Worcester Boys Club
16. Northworks (restaurants, retail)
17. Commonwealth Office Furniture
18. 85 Prescott (Mass Academy of Math and Science, ECI Biotech)
19. Trinity Lutheran Church
20. Epworth Methodist Church
21. Worcester Fire Department Headquarters
22. Worcester Memorial Auditorium
23. Courtyard by Marriott Hotel
24. Waites Company; Coghlin Companies
25. Columbia Tech

WPI Life Sciences and Bioengineering Center



WPI Life Sciences and Bioengineering Center



- Completed: April 2007- on time and on budget
- 124,600 square feet; four stories
- \$50M investment by WPI
- Home to the following WPI Departments:
 - > Biology and Biotechnology (BBT)
 - > Chemistry and Biochemistry (CBC)
 - > Biomedical Engineering (BME)
 - > Chemical Engineering (CHE)
- WPI Interdisciplinary Research Groups (“Centers”)
 - > Tissue regeneration and stem cell biology (BBT, BME)
 - > Tissue mechanics and mechanobiology (BBT, BME)
 - > Plant systems (BBT, BEI, CBC)
 - > Molecular nanotechnology and molecular sensors (BEI, CBC, CHE)
 - > Applied molecular genetics (BBT)
 - > Advanced technologies in biological imaging and sensing (BME, BEI Center for Untethered Healthcare, ECE, ME)
 - > Cellulosic biofuels (BBT, CBC) – ethanol gas made from non-food sources
- Bioengineering Institute (BEI), an interdisciplinary organization dedicated to turning life-sciences technology into workable products
- Companies: Coley Pharmaceuticals; Blue Sky Biotech; Targeted Cell Therapies; CellThera; Advanced Body Sensing; Active Surface Technologies; RXi Pharmaceuticals

WPI Life Sciences and Bioengineering Center

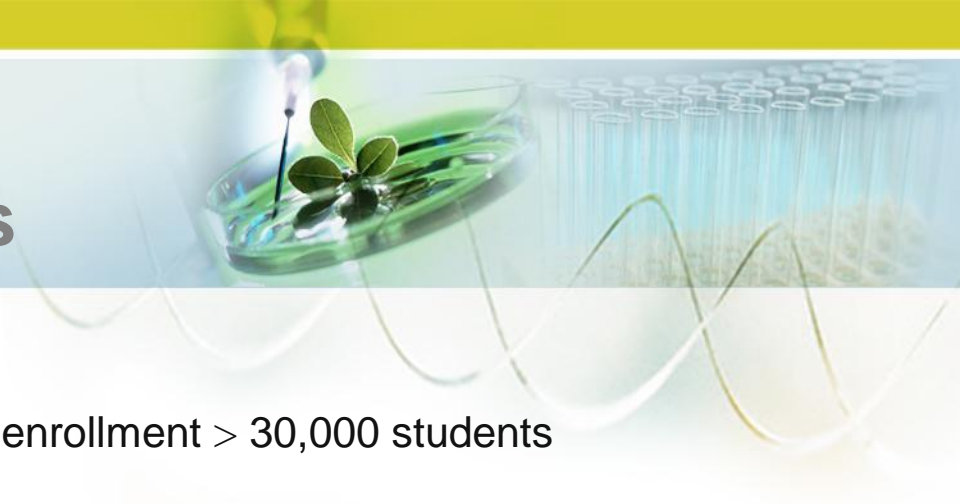


- Massachusetts Biomedical Initiatives (MBI) - (Kevin O'Sullivan), a successful independent, tax-exempt incubator that supports the founding, growth and expansion of biotechnology and medical device companies
- Bioprocessing laboratory (Alex Dilorio)
- Headquarters for WPI's Corporate and Professional Education Programs

“WPI's Corporate and Professional Education Department is currently retraining 20 of our non-exempt technical employees in biotech operations at their Worcester facilities...In the near future we are hoping to build upon this experience in order to provide training for our chemical engineers and chemists to provide them a smooth transition into the biotech field using what I believe to be very transferable skills.”

– William J. Allen, Process/Project Engineering Manager, Polaroid Chemical Operations Division
- Also in Gateway District, ECI Biotech (Mitch Sanders), a leading-edge company engaged in research and development of new antibody detection technologies
- 100 seat state-of-the-art auditorium; Internet café (π); conference rooms, etc. for use by companies in the Park
- Courtyard by Marriott (plans to expand and add larger conference facilities)

Central Massachusetts - tremendous opportunities



- The Eds and Meds:
 - > 13 colleges/Worcester area: enrollment > 30,000 students
 - > UMass Medical
 - > Massachusetts College of Pharmacy and Health Sciences
 - > Tufts University Cummings School of Veterinary Medicine
 - > UMass Memorial Hospital
 - > St. Vincent Hospital at the Worcester Medical Center
- The Commonwealth of Massachusetts continues to make major investments in Central Massachusetts as a life sciences, bioengineering center.
 - > UMass Medical School - 1980
 - > Worcester Biotech Park - 1990
 - > Gateway Park - 2005
 - > Bristol-Myers Squibb - 2006
 - > BMC – Biomanufacturing Initiative – 2006
 - > Massachusetts Growth District Initiative - 2008

The Trend Westward

- Developing companies and their CEOs are moving westward between Routes 128 and 495 and along the Route 495 corridor
- In the past five years 20 biotech companies – including 14 from Cambridge – have moved into space along Rt. 128 ⁽⁶⁾
- Genzyme: headquarters is in Cambridge, but their largest research facility in the world is in Framingham. Also in Southborough, and Westboro - they're moving westward!

“Genzyme regularly evaluates locations where we might expand our research or manufacturing presence to help sustain our growth. We were greatly impressed by Gateway Park and consider it to be an attractive spot for any biotechnology company looking to grow in Massachusetts.”

- Henry Fitzgerald, Vice President of Facility Operations, Genzyme Corporation

- WPI sponsored the second annual Biotechnology & Bioengineering Corporate Forum on March 22, 2007 with over 225 life sciences professionals in attendance. Keynote speaker 2006 – Jim McGovern; 2007 – Tim Murray



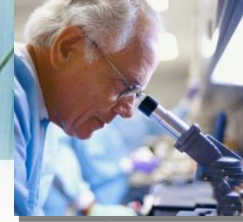
The Trend Westward



- 49 of the 100 largest Biotech firms in Massachusetts are located between 128 and Worcester ⁽⁷⁾
- Only ONE of the top 25 medical device firms is in Boston ⁽⁸⁾
- Following companies are now in Central Massachusetts:

Abbott Labs (Worcester); Cogmedix (Worcester); Charles River Labs (Shrewsbury); Bristol-Myers Squibb (Devens); Thermo Fisher Scientific – Athena Diagnostics (Worcester); Pall Corporation (Northborough); Waters Corporation (Milford); Sepracor (Marlborough); Boston Scientific (Marlborough); Hologic Corporation (Marlborough); Caliper Life Sciences (Hopkinton); Boston Life Sciences (Hopkinton); Nypro (Clinton); RXi Pharmaceuticals (Worcester)

The word spreads...



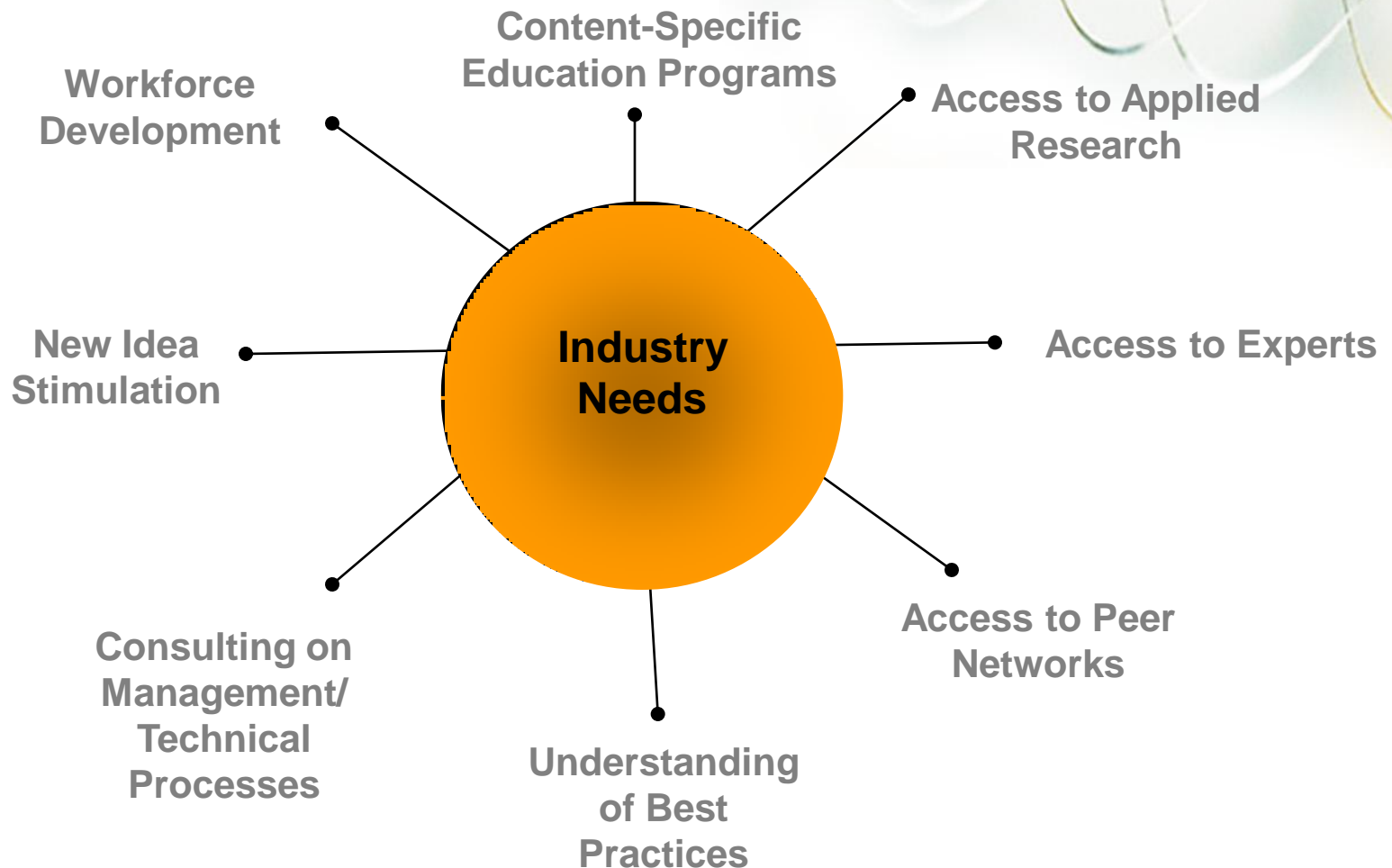
- **2006 Silver Hammer Award:** Presented by the Worcester Chamber of Commerce on December 12, 2006 (Silver Hammer Awards recognize projects that have had visual, aesthetic, or economic impacts on the region)
- **2007 United States Excellence in Economic Development Award for Urban or Suburban Economic Development from the U.S. Department of Commerce:** Presented November 29, 2007 at Gateway Park
- **2007 United States Phoenix Award:** Presented at the U.S. National Brownfields Conference on May 6, 2008 in Detroit, MI
- **Gateway Park Designated First Massachusetts Growth District:** Announced on February 26, 2008 at the WPI Life Sciences and Bioengineering Center at Gateway Park

What's the vision?



- A launching pad for WPI and other academic and medical institutions to enhance their leading-edge research programs in life sciences, biotechnology and bio/chemical engineering
- A destination for companies large and small – representing the entire continuum of life sciences product development: inception, refinement, and commercialization.
- A hub for the development and delivery of education and workforce training programs to support life sciences, bioengineering and biomanufacturing
- A vibrant community of young professionals; an environment that fosters the exchange of ideas among scientists, scholars, students and entrepreneurs
- A tranquil, tree-lined, landscaped mixed-use campus close to the cultural pulse of the city (Worcester Art Museum, Tuckerman Hall, Mechanics Hall, DCU Center, Institute Park)
- A new life to downtown Worcester by establishing a mixed-use destination which includes companies, residential and retail establishments

What Does Industry Want From Academia?



Meeting the Needs





biogen idec genzyme


Abbott Laboratories



Boston
Scientific
Delivering what's next.™

PHILIPS
sense and simplicity


charles river
accelerating drug development. exactly.

Alkermes
Patient inspired™

 **DePuySpine**™
a Johnson & Johnson company

Shire

HOLOGIC®
CLARITY OF VISION

 **COVIDIEN**
positive results for life™

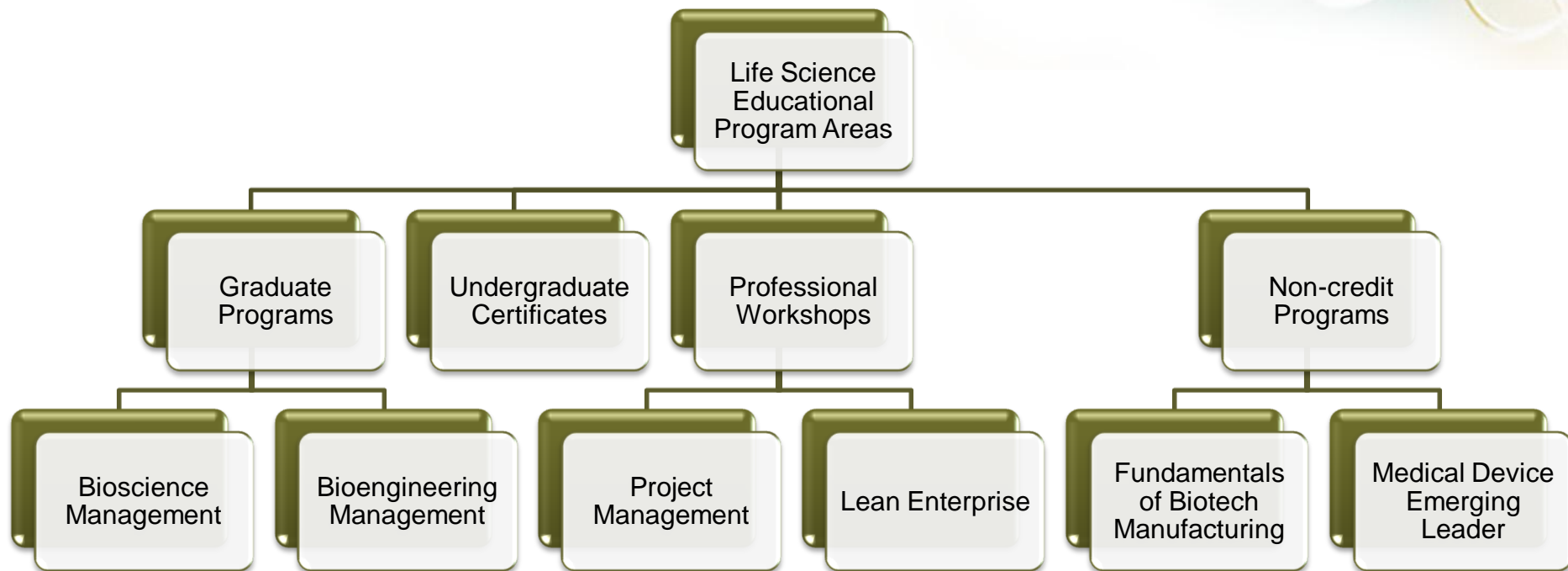
Waters
THE SCIENCE OF WHAT'S POSSIBLE.™

AstraZeneca 

 **Medtronic**

 **NP Medical**
Leading Innovation in Medical Fluid Delivery

Partnering with Industry to Develop Effective Educational Solutions



Highlighted Partnerships

- ❖ Onsite Graduate Degree – Bioscience Management
 - ❖ Well-rounded program in Biotech, Chemistry and Business
- ❖ Onsite Undergraduate Certificate – Bioscience Regulations
 - ❖ Introduction to the science behind the equipment



- ❖ Non-credit Workshops in Project Management (Global)
 - ❖ Establishing a knowledge base across business units

Benefits of partnering:

- ❖ Tailored programs to meet business needs
- ❖ Increased retention and effective recruitment
- ❖ Flexible scheduling to fit with organizational culture

Polaroid: Transitioning Workers into Biotech Manufacturing



- The Need:
 - > A quick, effective program to provide chemical operators with the skills necessary to transition into biotech manufacturing
- Available Solutions:
 - > Too long, not focused on hands-on skills training
- The Partnership:
 - > WPI, Industry, Government
 - > Developed a custom program utilizing WPI resources and bioprocessing knowledge, Industry experts, and Government funding
 - > 5 week, Hands-on Training in a cGMP simulated environment
- The Result:
 - > Placement at Abbott, Genzyme, Lonza, Johnson Matthey Pharma, Mass Biologics Lab, Shire, Biogen Waters

Fundamentals of Biotech Manufacturing Certificate Timeline

September
2006:
Polaroid
begins
search for
workforce
transition
programs

February
2007: 50+
Polaroid
employees
attend WPI
cGMP
workshop

3 additional
sessions
run
between
Summer
2007-
Summer
2008

November
2006:
Polaroid
chooses
WPI as
partner

March 2007:
Fundamentals
of Biotech
Manufacturing
Program
launches with
20 students

October 2008:
Development
of next
generation
program
begins

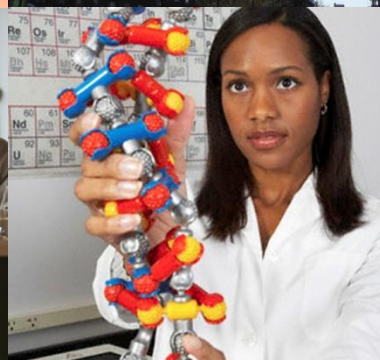
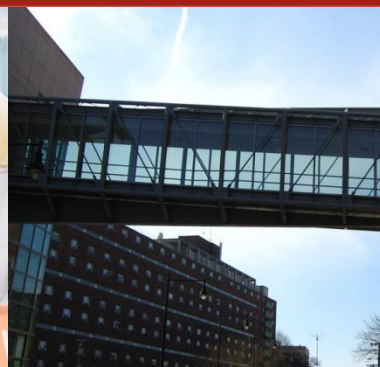
A Case Study

- **The Polaroid Program: In Their Words...**



Gateway Park

Making space for genius.®



Sources



- (1) Cushman & Wakefield, Meredith & Grew
- (2) WBDC/City of Worcester Statistics
- (3) Remedy Intelligent Staffing, Inc. – Life Sciences Group
- (4) Milken Institute Research Report, “America’s Biotech and Life Science Clusters: San Diego’s Position and Economic Contributions,” Ross DeVol, Perry Wong, Junghoon Ki, Armen Bedroussian and Rob Koepp, June 2004.
- (5) Boston Globe, October 9, 2006.
- (6) Boston Business Journal, July 14, 2006.
- (7) Boston Business Journal, Book of Lists, October 2006.
- (8) Boston Business Journal, Book of Lists, January 2007.