Greening the Campus—Value Added

College of Lake County’s New LEED Platinum Science and Engineering Building and Other Sustainable Initiatives are Paying Off

PRESENTERS:

KEN GOTSCH, CLC VP–Administrative Affairs | MIKE WELCH, CLC Director of Facilities
SCOT PARKER, Principal at Legat Architects | BRUCE LOCKE, Managing Director at Tactus, Inc.

2019 ICCCFO Spring Conference
May 2, 2019
Agenda

1. CLC Overview
2. Sustainability Overview
3. Greening the Campus
4. Enhancing the Bottom Line
5. LEED Platinum Science & Engineering Building
CLC Overview

Comprehensive, public community college located in northeastern Illinois
CLC Overview

Lake County Population
703,520

3
Campus Locations

Grayslake
Vernon Hills
Waukegan
Mission
The College of Lake County is a comprehensive community college that delivers high quality, accessible learning opportunities to **advance student success and strengthen the diverse communities we serve.**

Vision
The College of Lake County strives to be an innovative educational institution offering exceptional learning experiences and **to be widely recognized for student success, business and community partnerships** and for the achievements of faculty, staff and alumni.
CLC Overview

• Serves more than 40,000 community members

• Fall 2018: 14,194 total students with 8,019 FTE pursuing a credential
  • 59 Associate Degrees
  • 119 Certificate Programs
  • 25+ Guaranteed Transfer Agreements
  • 17 High School Districts (Superintendents)
  • 23 High Schools ( Principals)
CLC Overview

• **Priority Objectives**
  - Advance **student learning**, success and completion
  - Maximize **educational opportunity** and equity in student outcomes
  - Promote excellence in the areas of Diversity, Global Engagement, **Sustainability**, and Wellness as strengths within the College and Lake County Community
  - Enable a **culture of innovation, excellence**, and continuous improvement

• **Strategic Plan 2019-2023 and 50th Anniversary**
  - CLC will launch its 2019-2023 strategic plan in conjunction with its 50th anniversary celebration in 2019
CLC Overview

A life-changing path

The College of Lake County provides students with a life-changing path from dreams to bright futures.
Sustainability is the Guide and Resource for the College as Living Laboratory

- *Foundation* of the college and natural resources provide the context
- *Institutional values* and *governance* provide direction and structure
- Campus facilities, grounds, and operations can go hand in hand with curriculum
- Sustainability extends into our community and linkage with our local employers
Sustainable CLC

It’s who we are. In our strategic goals.

Promote excellence in the areas of diversity, global engagement, sustainability and wellness.

The college will strive to build an inclusive community that recognizes, values and respects people of all cultures and ways of life, while cultivating social justice, global citizenship and Environmental responsibility.

“Sustainability is baked into our DNA at CLC.” – Dr. Lori Suddick
Shared Governance Reflects Strategic Priorities

- Student Governance
- Diversity Council
- Governance Coordinating Council
- Sustainability Council
- Health and Wellness Council
- Commissions Committees
CLC is a *Living Laboratory*

Community Demonstrations:
- Efficient Buildings
- Renewable Energy
- Stormwater Management
- Much more…

Student Instruction:
- Technology
- English
- Math
- Economics
- More…
Begins with Greening our Campus
Greening Our Campus: Geothermal Heat Exchange System
Greening Our Campus: Energy Efficiency

Installing LED Lighting Upgrades
Greening Our Campus: Rethinking Transportation
Greening Our Campus: Farm ↔ Food Service
Greening Our Campus: New Technology also a Living Laboratory

Training and Operations
Greening Our Curriculum

“With the incorporation of sustainability in the curriculum student knowledge inquiry, topic creativity, critical thinking, research performance, and presentation development and delivery were significantly improved.”

AQIP FY17 — Kari Proft
Living Laboratory: Biology–In Our Back Yard
Living Laboratory: Green Roofs

- Southlake and Science Building
- Cool in summer
- Absorb rain water
- Shield UV rays
- Teaching Students
- Community demonstration
Living Laboratory: Sustainable Landscaping

- Reduce maintenance over long term
- Reduce emissions
- Improve habitat for biodiversity
- Improve stormwater management
Certificate Program:
Alternative Energy Technologies, 1 year program

- **Subject matter:** Study of wind, solar and geothermal energy sources. Emphasis on electricity production and conductivity
- **Careers:** Installation, manufacturing, supply chain management, operation and maintenance of equipment

Associate Degrees:
Sustainability (Policy and Social Aspects) A.A.
Sustainability (Science and Technical Aspects) A.S.

- General AA and AS coursework, with emphasis in
- **Natural sciences:** Geology, environmental biology, geography, meteorology, natural areas management
- **Social sciences:** Political science, social problems, anthropology, international-multicultural studies
- **Humanities:** Ethics
Partnership with Sustainability
Sustainability Awards

- **2018 Rankings** – 1st in Illinois, 2nd in the Midwest, 6th in USA, 8th in North America

- 2017 Stormwater Best Practices Award
- 2017 STARS Silver
- 2017 Emerald Award
- 2016 Green Genome Award
- 2015 Second Nature Climate Leadership
- 2014 Illinois Campus Sustainability – Gold
Greening our Community through the “Living Lab Trail”

Interpretive Signage & Trail Completion

• Encourage exploration of:
  • Sustainability features
  • Wellness opportunities
Enhancing the Bottom Line
A Branding Opportunity that Helps Bottom Line:

- Support enrollment
- Student engagement supports retention
- Graduation and transfer successes
- Grants funding support
  - $600,000 Green Fund
- Return on investments
  - LED retro fit 6.7 years
FY2020 Budget Draft Submission – *Facilities Department Operating Expenditure Overview*

Square Footage vs. Operating Budget

- **2013**: 1,000,000
- **2014**: 1,002,560
- **2015**: 1,139,300
- **2016**: 1,143,900
- **2017**: 1,203,900
- **2018**: 1,243,900
- **2019**: 1,243,900

- **Square Footage**
- **Operating Budget**
# Department Cost Savings to the College

## Electric

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<tr>
<th>Year</th>
<th>Month</th>
<th>Usage</th>
<th>Cost</th>
<th>Square Footage</th>
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<td>2,276,455.16</td>
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<td>August</td>
<td>2,244,301.58</td>
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<td>2018</td>
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## Gas

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<td>August</td>
<td>23,351.40</td>
<td>$ 15,207.89</td>
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Partnership with the Capital Development Board

1995
Performing Arts Center | $29,000,000

2005
Technology Building | $35,000,000

2017
Science & Engineering Building | $25,000,000

2021
Lakeshore Campus Expansion | $48,000,000
A sustainable commitment to the community that anchors the south end of campus
A Partnership with the Environment

Engineered efficiency. Efficiently engineered.

Taken individually, the solutions are relatively simple. But fully realizing their cumulative, interdependent benefit is a complex proposition requiring expert engineering.

AECI applies expertise and experience in a cost-effective planning and design process enabling highly efficient building operation.

- Complete integration of architectural and engineered systems from the outset of planning.
- Risk/benefit-balanced selection of proven technologies.
- Modeling-based performance verification.
- Controls sequencing, metered operation.
Building as a Living Laboratory for Sustainability

- Photovoltaic Array
- Auxiliary Boilers
- Variable Volume Exhaust System
- Rainwater Harvesting System
An architectural expression of STEM education
• Materials that respect the existing campus
• A new campus entry adjacent to parking
A new entry experience and building organizer
Lasers, Photonics, and Optics Lab

NSF Grant-funded Equipment
Automation, Robotics and Mechatronics Lab
Automation, Robotics and Mechatronics Lab

Mechatronics:
- Combines mechanics, electronics and control technologies
- Program emphasizes broad, hands-on systems-level knowledge and troubleshooting

Automation Cell:
- Teaches operation and troubleshooting
- Cutting-edge manufacturing workplace experience
Automation, Robotics and Mechatronics Lab

“BAXTER” — Humanoid Robot

“FANUC” — Robotic Arm
Mechatronics “Trainer”

NSF Grant-funded

Used for dual credit in local high schools
Third Floor Plan

- FACULTY OFFICE
- DRY STORAGE
- CHEMISTRY LAB
- CHEMISTRY LAB
- CHEMISTRY LAB
- INSTRUMENT LAB
- CHEMISTRY LAB

GREEN ROOF
Science labs designed to maximize daylighting and daylight-harvesting
State-of-the-art Science teaching labs compatible with 4-year institutions