Meeting Workforce Needs Through Business Leadership, Not Advice

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Setting the Context

- National Convergence Technology Center is a national Advanced Technological Education (ATE) Center with National Science Foundation (NSF) funding primarily in the area of networking infrastructure/mobility/data communications.
- Broadening Advanced Technological Education Connections (BATEC) is a national NSF ATE Center primarily focusing on computation and work in urban areas.
- National Information and Communications Technology Center (NCICT) is a national NSF ATE resource Center.
Setting the Context

- All three Centers have found that tight integration with businesses and letting them lead, not just advise, has produced positive benefits for students.
National Convergence Technology Center

- Processes developed under the Regional Center for Convergence Technology
- A National Science Foundation Center based in Frisco, TX at Collin College
- Created in 2004 to revitalize IT education in the North Texas region
- Approach with businesses applies to creating/maintaining/reinvigorating any technology program
Our Goals

• Create convergence degrees and certificates driven by business need
• Provide professional development for faculty
• Recruit and retain underserved students
• Disseminate products and services
The Typical Business Advisory Council

- Meets 1 or 2 times per year, sometimes the only time the reps are on campus
- Mixed level of knowledge in membership
- Advises regarding a program, sometimes just reviewing rather than leading
- BAC members often find their time split between regional colleges because each college has its own council
Suggested Engaged BILT Model

- Business and Industry *Leadership* Team (BILT)
- Regional Council (or even national) advising multiple colleges
- Meets quarterly, not 1-2 times per year
- Right people on the council
  - High-level technical executives
  - First line managers
  - Technicians
  - HR representatives as long as they are not the sole reps for a company
More than an Advisory Council

- Businesses LEAD the work and are part of the leadership team
- Appropriate name is Business & Industry Leadership Team (BILT) – *Leadership*, not Advisory
Role of the Engaged BILT

- Trends identified before need for skills to support the trend (allows time to develop curricula)
- Solid process, business-driven, to determine Knowledge, Skills, and Abilities needed from graduates (faculty determine how to address KSAs)
- Forecast need for future employees
- Involvement in recruitment events
- Involvement in professional development for faculty
Role of the Engaged BILT

- Provide internships for students
- Provide externships/job shadowing for faculty
- Guest speakers
- Co-author whitepapers
- Evaluate capstone presentations
- Participate in panels at conferences
Engaged BILT Results in JOBS for students!!

Graduates have been hired for:

- Applications Integration Specialist
- Helpdesk Support
- IT Support
- Mobile Support
- Network Analyst
- Network Engineer
- Support Engineer
- VoIP Technician/ Specialist
Quite simply:

An Engaged BILT...

...owns your technical program
If your program already exists but is not owned by the businesses

It’s likely already institutionalized
• Faculty are already educated to teach
• Courses are already scheduled
• Certificate and degree patterns already approved
• Could your program benefit from more engagement?
If your program is new, you can start from scratch

- Start with the business need
- If there is no validated need, then there is no need for your proposed program
Regional Businesses Need To Own the Program

- CTC process for forming and continuing to engage an active Business and Industry Leadership Team (BILT)
- Quarterly BILT meetings
- Trends are the first item of discussion
- All curriculum driven by and approved by the BILT
Building or Reinvigorating an Engaged BILT

Education is a business, and there are consumers for our product: our graduates.

- Businesses
- Industries
- Governments agencies
- Non-profits
- Universities
Target Membership

Determine which businesses, industries, agencies, non-profits, and universities should be represented

- Distribution of size and type
- Do not limit to just large companies; medium and small companies provide perspective and are likely to hire as well
Determine Your Expectations

- What do you want to get from the BILT?
- Develop “sales” script for recruitment
- Establish expected time commitment per quarter (typically 2-hr call plus optional other events)
Establish expectations of optional involvement activities

- Job skills validation – detail the process
- Course and curriculum validation/modification
- Job forecasting- anecdotally and through surveys
- Internships
- Job shadowing/externships
- Providing expertise in set-up and operation of labs
Expectations (continued)

- Donating equipment or other resources
- Providing speakers at student, public and education events
- Helping with recruitment
- Teaching Case Study courses
- Consulting with students

Bob Wright with Mary Patton, the CTC’s first graduate.
Mary, a Sr Support Engineer, is now a member of the Case Study Business Panel, critiquing capstone presentations.
Engaged Business Requires High-Touch

- Requires personal contact, not mass mailings or mass emails.
- Target businesses and industries, universities and agencies that hire people with the job descriptions representing your curriculum.
Getting the Right People

Contact the President of the company or university

- Share your vision of what the program can mean to the region.
- Explain the importance of the company’s having a subject matter expert, usually first-line manager, involved in the BILT. (SME required; HR representative optional)
Emphasize Win-Win for the Business

- Not just an expected to contribute
- Opportunities to:
  - Share trends in a non-proprietary environment
  - Build pipeline of “right-skilled” future employees
Characteristics of an Engaged BILT Meeting

- Invite all faculty to attend the meetings as observers to gain their buy-in as to what the BILT wants
- Publicity – invite reporters/writers
- Refreshments – not elaborate, but important to have, especially early in the morning
- Time – early morning typically works better, before BILT members go to the office
Other aspects of the BILT meeting

- Explain how important they are to the program and what their companies will get from their involvement
- Clarify roles and responsibilities between BILT and educators (educators are there to listen, not to present or run the show)
- Explain need for quarterly meetings and establish dates for the year
Engaged Business Council Requires High-Touch

Other aspects of the BILT meeting:

- Ask for Trends – what’s “hot”, where hiring is expected, etc.
- Review opportunities for helping from your “sales script”
- Stick to the agenda and keep discussion rolling, limiting those who might want to dominate
Other aspects of the BILT meeting

- Acknowledge the importance of their time by starting and stopping on time regardless of whether or not your agenda is complete.
- End early if you have what you need. You can always complete your work on email.
- Take minutes; publish them; have next BILT approve them.
BILT recognition

- News releases/articles
- Photos and bios on your web site
- Thank your emails (personal, not mass emails)
- Thank you letters to the President and their bosses
- Certificates & Plaques
Keeping the BILT fresh

- Aim to have at least one new member each quarter and introduce them.
- Talk with each member individually at least yearly to ask them what they think you could do differently to obtain more from them or the entire BILT.
Benefits from following this approach

- Business ownership of your curriculum and your program in general
- High interest in hiring your students above other applicants because they know what your students know
- Faculty recognize and understand business requirements first-hand
BILT Provides Labor Market Demand

- BILT and others are surveyed every 2 years to determine demand for graduates with the new skills
- Partner with regional non-profit, Interlink, that works with businesses and educational entities in the region
BILT Supports Professional Development

- Businesses often provide tracks for week-long professional development through CTC

- Example: Working Connections Institute each summer and winter
  - Winter Working Connections
  - Dec. 17-19, 2012 – Frisco, TX
  - Travel stipends
  - Tracks included: ITIL, Junos as a Second Language, IPv6
BILT Members Help with Student Recruitment

- Requires gentle pressure, relentlessly applied, especially if new program is arising from a discipline that has been depressed (such as IT in the early 2000s)
- Having businesses present and presenting strengthens the “ask”
Insert BATEC slides here
National Center for Information and Communications Technologies at Springfield Technical Community College

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Verizon NextStep Program (NSP)

- Started 1995
- Allows qualified Verizon employees who are members of the Communications Workers of America (CWA) or the International Brotherhood of Electrical Workers (IBEW) to earn an Associate in Applied Science degree in Telecommunications Technology from a partnering community college.
- Verizon NSP technicians since startup: 7,701
- Currently in Program: 1,154
- Retention Rate: 73%
### New York - Lead college in bold

- Bronx Community College
- Broome Community College
- Clinton Community College
- Dutchess Community College
- Erie Community College

**Hudson Valley Community College**
- Mohawk Valley Community College
- Nassau Community College
- New York City College of Technology
- New York Institute of Technology
- Onondaga Community College
- Queensborough Community College
- SUNY Canton
- Suffolk Community College
- Watertown DL
- Westchester Community College

#### Location
- Bronx, NY
- Binghamton, NY
- Plattsburgh, NY
- Poughkeepsie, NY
- Buffalo, NY
- Troy, NY
- Utica, NY
- Garden City, NY
- Brooklyn, NY
- Manhattan, NY
- Syracuse, NY
- Bayside, NY
- Canton, NY
- Selden, NY
- Watertown, NY
- Valhalla, NY

### New England - Lead college in bold

- Community College of Rhode Island
- Massasoit Community College
- Massasoit Community College
- Middlesex Community College
- North Shore Community College
- Quinsigamond Community College

**Springfield Technical Community College**

#### Location
- Warwick, RI
- Brockton, MA
- Canton, MA
- Lowell, MA
- Lynn, MA
- Worcester, MA
- Springfield, MA
Verizon NextStep Program (NSP)

- Verizon, the CWA, and the IBEW have been actively involved in ICT Center activities since its inception in 1995.

- Value its ongoing work in promoting ICT technician education and skill standards.

- Using guidance from the ICT Center, the Verizon Next Step Program has modified its curriculum to better meet Verizon’s needs as a leader in delivering broadband, wireline, and wireless services to nearly 143.7 million customers nationwide.

- The ICT Center continues to vision skill sets needed by future ICT technicians and work continues to assist community colleges across the country in integrating these skill sets into their curriculum.
Comcast Technician Training

- Cable industry is now fully involved in implementing significant technology changes as systems are upgraded and new services are rolled out.

- ICT Center currently working with Comcast making adjustments to both the vision for technical training as well as curriculum and content.
  - Significant changes have taken and are taking place in cable industry.
  - Center provides the information and expertise needed to insure that the skills and knowledge inventory needed for network infrastructure and network device technician categories is current for the industry.
Comcast Technician Training

- New systems and services are predominantly TCP/IP-based and conversion continues for both networks and services from traditional analog delivery methods to digital formats delivered using TCP/IP.

- A substantial challenge in educating and training technical personnel, specifically higher level technicians, in TCP/IP technology and cable infrastructure (Satellite, fiber, coax).

- TCP/IP based technology, being fundamentally different from legacy analog delivery technology, requires different core knowledge.

- ICT Center is providing insights and perspective as teaching faculty in helping put together the best material possible to prepare the Comcast workforce to continue to deliver world-class service to their customers.
How to get started

- The National CTC has a mentoring program called The Convergence College Network (CCN) that provides free
  - Curriculum
  - Recruitment materials
  - Professional development

PLUS
Human support to implement your programs
24 Colleges in Convergence College Network (in 12 states)

- Orange Coast College
- Santa Ana College
- Guilford Technical College
- City College of San Francisco
- Ohlone College
- Fox Valley Technical College
- Clark State Comm. College
- Lansing Community College
- Tarrant County College
- Northwest Vista College
- Porterville College
- Louisiana Technical College
- San Jacinto College
- Diablo Valley Community College
- John A. Logan College
- Florida State College, Jacksonville
- Seminole State College
- Anne Arundel College
- Wiregrass Georgia Technical College

- Cleveland Community College
- Polk State College
- Daytona State College
- Brevard Community College
- Metropolitan Community College
What the CTC provides

- Job Skills List that has been regionally validated
- Process and help for validating skills in mentored college region
- Degree and Certificate Patterns
- Curriculum in a box for new courses
- Detailed syllabi with learning outcomes
- Learning/Lab Activities
- Assessments
- Case Studies
What the CTC provides

- A lead faculty member to assist
- PI or grant staff as an administrative contact
- Training for faculty through summer institute
- Equipment list
- Recruitment plans and event details
Convergence College Network (CCN) College Commitment:

- Equipment and support for a lab (varies by depth and breadth of programs needed in your region)
- Lead faculty member
- Other faculty interested in being trained and in implementing the program
- Faculty and administrative time available to work with CCN college representatives
- Active and involved Business & Industry Leadership Team (built with CTC help)
Convergence College Network (CCN) College Commitment:

- Validate job skills with Business & Industry Leadership Team
- Develop and implement a degree and/or certificate plan based on validated skills
- Develop and implement a student recruitment plan
- Provide brief, quarterly reporting to CTC
The future...looks Mobile and in the Cloud

Applications available by:

• Downloading the form off our website
• Giving us your card
## For more information:

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