

Created: February 11, 1998  
Revised: March 29, 1999

## **Concept Paper on:**

### **WEB BASED APPROACH TO:**

**PERSONNEL CAREER PATHING; TRAINING SERVICES;  
PLACEMENT SERVICES; and HUMAN RESOURCE  
MANAGEMENT**

## **Proposal to Lehigh University**

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**ABSTRACT:**

There are two things that everybody will always need - Training and a Job. The better trained an individual is, the better their chances for obtaining an excellent job at a high salary.

Schools and Universities have been established to provide students with the training they need to obtain jobs offered by business. If that training is outdated, then business will not have jobs for the students and universities will not be able to attract students. This paper is a proposal to Lehigh University for integrating real world business requirements and practical experience with the academic curriculum offered at Lehigh University.

**DIRECTION:**

In order to achieve this goal business should be queried to determine the types of jobs they have a need to fill, both presently and in the future. Additionally, the type of vendor products that will be utilized by business and the training / certifications available for the vendor products should also be determined. Finally, regulatory requirements that companies must adhere to should be explained and thoroughly understood by graduating students. Once this information has been accumulated, then curriculums can be established to provide students with the training and certifications needed by business.

Students entering college may not know what careers are available to them and the training / certifications needed to achieve the job positions they seek. Universities must be prepared to provide students with career path awareness, so that the student will have a clear understanding of:

1. the types of jobs that are and will be available;
2. the training and certifications needed to achieve the job positions they desire; and,
3. the path(s) normally taken to achieve the goals they desire.

This information can then be made available to college students and alumni as a service of the University.

***Information Availability:***

To reach the widest audience available while making it easier to achieve the goals of this endeavor, it is recommended that both normal paper based methods for providing information and the new Internet based technologies be employed (virtual classrooms and online collaborations tools like "Go To Meeting" etc.). To promote this direction college affiliations and alumni can be contacted first, then newspapers and trade organizations, and finally high schools and academic organizations. Government agencies can be solicited to determine if grant money is available to support these efforts and help retrain people presently on the welfare rolls (job retraining services presented to the general public, which would convert Welfare to Job fare, thereby eliminating costs and receiving tax money).

The Internet can be used to broaden the audience available to this program. Businesses can be solicited to determine the positions available (present and future) and vendor products / certifications needed to satisfy the skills to fill open positions. Students can complete profiles and generate resumes. Counselors can then match student profiles to business job skill requirements (this process can also be

achieved through electronic agents built into the Internet service). Students can then be provided with summer intern or part-time job opportunities while attending college (extern), thereby developing a “hands-on” professional understanding of the industries / positions they may be seeking in their careers. Full-time permanent employment can also be sought for graduating students and alumni through this service. If possible revenue can be generated for the school through these efforts.

A Help Desk facility can be established at the University, which would be manned by Students (level I support), with Graduate and Faculty backup (Level II support). Vendor support (Level III support) and Business Continuity Management / Emergency Management procedures (Level IV support) would also be integrated within the Help Desk process, thereby providing students with real-world experience making them more valuable to hiring firms.

Both local firms located around the University and alumni firms can benefit through the Help Desk, as well as the University itself – which could generate revenue from provided services and the preparation of Recovery Plans for a range of disaster events, while using this service / technique as a recruiting aid.

### ***Student Services:***

This service can be used to provide students with career information needed by them to select their curriculum and major. Business can be provided with census information regarding students seeking positions in their fields, making adjustments if candidates are not sufficiently trained to satisfy available positions. Students and Businesses can also benefit through direct contacts developed through work assignments and customer support provided through Help Desk activities.

### ***Case Studies:***

The University can solicit Case Studies from its clients, so that students can respond to actual industry requirements through their participation on a Case Study team, which would receive, analyze, draw conclusions on, formulate recommendations, and respond to Client requests. These students could receive credits, or payment, for their services and the University can develop a data base of Case Studies to draw on and publish. Case study teams will be manned by students and faculty from all branches of the University (e.g., Education, Business, Mechanics, Electronics, etc.).

### ***Classroom and Internet Based Classes:***

The University can develop classroom / Internet based curriculum in response to business needs presented to them by client companies. Curriculum and Degree Programs can be tailored to meet specific student needs through modules geared to specific jobs / industries. Vendor Certifications can be added to curriculum to provide students with specific skills needed by client companies. These services can also be provided to clients through classroom and interactive studies, thereby strengthening the bond between the university and the business community.

### ***Placement Services:***

Students can search a personnel placement system that includes available jobs. Students can also add their resumes to the system and create search agents that would review new jobs and route the job

description to students having the skills needed to fill job positions. This service could help students through placement and businesses by providing personnel having the skills they require for open positions. It is a “win-win” situation that can also generate a lot of money in placement fees and new student enrollments. If clients are interested, then students and hiring managers are brought together for an interview (phone, on-line, or face-to-face) and placement. These services could be provided to students and alumni in an ongoing basis.

### ***Job / Career Center Assistance:***

Once developed, the services can be used to support government and private human resource development centers geared to reduce the welfare rolls through retraining of adults to meet new job market needs. This service may be able to receive grant money under some circumstances. Nominal fees could be charged to students, if needed, and placement fees can be solicited from employers hiring graduates.

To make this program even more successful, business should be solicited to determine the range of job functions that must be satisfied (both currently and in the future) and the skills needed to meet the demands of these positions. Course materials could then be developed to meet these needs, thereby guarantying that students and business receive training that is needed to satisfy real-world requirements. This process should be performed every semester to insure that the University is keeping current with the needs of Business and providing Students with the skills best suited to meet the needs of Business.

Business can be solicited to post job openings and job descriptions for students to respond to. Professional recruitment firms can also be solicited to provide job posting for students to respond to. A fee can be charged for job posting, while students can use the system for free. Assistance in creating resumes and conducting interviews can be provided to students for a small fee.

## **CONCEPT:**

### **Intranet / Internet based training, including:**

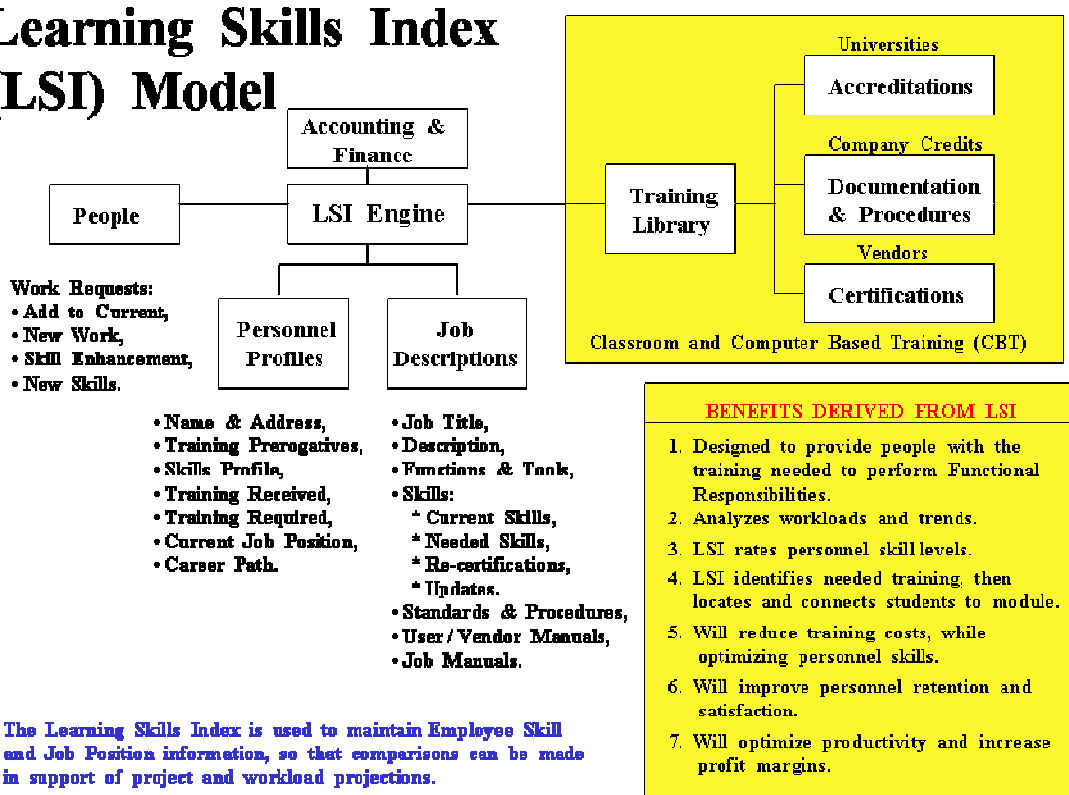
- **Academic Accreditation (University based, BS - Ph. D.)**
- **Help Desk manned by students and supported by faculty;**
- **Case Studies to address real world situations;**
- **Vendor Certification (i.e., MCP, MCSE, CBCP, etc.);**
- **Industry Job Function requirements met within curriculum;**
- **Job Centers (Adult Education and Re-Training);**
- **Changing Welfare to Job Fare;**
- **Career Centers (Personnel Career Path Planning - Placement);  
and**
- **Personnel Benefits (Life, Disability, Medical, Retirement, etc.).**

## OVERVIEW:

### Goal:

The Learning Skills Index (LSI) is used to connect industry, business, vendors, colleges, job centers, and career centers, with clients so that business and personnel needs can be defined and addressed by training and personnel placement organizations. This can be considered a forum to present business needs, vendor offerings, and personnel services to Clients that need career, education and placement assistance.

## Learning Skills Index (LSI) Model



Improve business efficiency through interactive personnel training and provide a greater number of people to fill presently available (300,000 jobs are currently available and cannot be filled due to shortages in trained personnel) and future positions (rapid growth projections and new technologies make the need for skilled personnel even greater). If these positions cannot be filled, then business will not be as efficient and vendors won't be able to sell products because of staff shortages.

Retrain people in response to current and future business needs. Reduce the Welfare Rolls and increase the Tax base. Incorporate a Virtual Trade School concept for this process.

Work in cooperation with Business, Vendors, Schools, Government, and Personnel Service firms to prepare personnel to fill business job positions.

**Description:**

<b>Business</b>	Submits personnel needs, including; training (vendor product and academic), and placement (permanent, consulting, and just-in-time temporary staffing). Also participates in Help Desk, Case Studies, Career Center, and Job Center activities.
<b>Vendors</b>	Provide product descriptions, certification offering descriptions, and training materials. Vendors have right to oversee course curriculum and syllabus to make suggestions for improvement based on their current and future needs. Students are tested and monitored to ensure that teaching program sufficiently prepares students for business environment. Vendor provides product certifications to successful students.
<b>Academia</b>	Classroom training and teacher support via web based facilities. Academic accreditation is provided by Lehigh University with Internet based courses in a wide variety of subjects. Adult education and client training can be accomplished via Internet, on campus, at client location, or at Job / Career Center.
<b>Job Center</b>	Replaces Welfare Offices with Job Center Offices and is used to provide career counseling and training for adults needing to be retrained to meet current and future job skill demands. Generates income from taxes paid by retrained and placed students, while reducing Welfare rolls.
<b>Career Center</b>	Replaces personnel placement firm concept by providing applicants with career path counseling, educational courses designed to help applicants achieve their career goals (degree and certification acquisition), placement services (permanent, consulting, temporary, outsourcing), and benefits (Life, Disability, Medical, Retirement, etc.).
<b>WWW</b>	World Wide Web is used to support communications between participants and to supply students with course materials and video conference based classroom. Interactive activities can be supported via eLearning and 3-D Virtual environments.
<b>Clients:</b>	People needing training and career path assistance through interactive courses and placement service. Students, Adults, and Company Employees can benefit through course offerings and career path counseling. Applicants will receive vendor certifications, and/or academic credits, for successful completion of course materials. Business and vendors can recruit candidates from students and alumni. High level of interaction is provided between business and service, so that any new business requirements can be addressed immediately. Also, Just-In-Time training and staffing demands can be met through these services.



**NEEDS ANALYSIS:**

- A. 300,000 Jobs are NOT presently being filled.**
  - 1. Economic Impact.
  - 2. Personnel Improvements.
  - 3. Benefits to business, people, and government.
  
- B. Costs of personnel recruitment and training.**
  
- C. Just-In-Time personnel services.**
  
- D. Personnel Career Path and Training Services in response to business and government needs.**
  - 1. Job Functions needing to be filled.
  - 2. Product Certifications and Degree requirements associated with business needs.
  - 3. School, Government, Industry, and Personnel Service firms construct training curriculum and delivery mechanisms (i.e., WWW, Classroom, Business Locations, Job Centers, Career Centers, etc.).
  
- E. Metrics, Monitoring, Testing and Reporting of student success and/or failure. Evaluation of results by participants. Upgraded course material and teaching mechanisms, to correct identified problem areas.**
  
- F. Consulting project based on size and needs of the organization, leading to an approved Curriculum and course development schedule. Total price of educational deliverable and Project Plan will accompany presentation of the Analysis' findings.**

**COOPERATIVE APPROACH**

- A. Method for gaining biggest bang for the buck, while advancing student careers and meeting the on-going needs of business.**
- B. Comprised of cooperative agreement between: Business, Vendors, Academic Community, Students, Government, and Personnel Service Companies.**
- C. Title I grant money to support Job Center and Academic course development.**
- D. Course curriculum and Syllabus development under the guidance and review of all participating organizations.**
- E. Certification and Academic Credits for students completing training from Lehigh University.**
- F. Course distribution to colleges, business, and individuals.**
- G. Metrics and Feed-Back.**
- H. Support and Maintenance.**
- I. Enhancements in response to emerging technologies and business needs.**
- J. Additional method for recruiting students and improving revenue to support training and University needs.**

## **TEACHING ENVIRONMENT:**

### **A. Classroom or Intranet / Internet based, utilizing:**

- 1. Video conferencing (interactive interviews, training and certification).**
- 2. Audio / Video / Text facilities (video resumes and presentations).**
- 3. Teacher presentation (classroom / video conferencing).**
- 4. Course Materials and Tests via web and classroom monitored.**
- 5. Interactive simulations of business functions and subject material.**
- 6. Chat Rooms (Text / Audio / Video).**
- 7. Links to pertinent materials, professionals, business organizations, and other relevant web sites.**

### **B. Client / Server orientation:**

- 1. Server houses course materials and curriculum.**
- 2. Client contains downloaded classroom.**
- 3. Professor is available through email and video conferencing.**
- 4. Evaluations via tests, simulations, and interaction with professor (Email, etc.) and other student interactions (Chat Rooms).**
- 5. Metrics used to evaluate student and course materials.**
- 6. Alumni are provided with updates and enhancements for a maintenance fee. This guaranty's that students stay current with subject material related to certification and/or degree.**
- 7. Periodic classroom meetings, as needed to present information, test student, evaluate performance, and obtain feed-back from students and business.**

### **C. Job Centers to retrain adults for current job positions and to help move people off the Welfare Roll and onto the Tax Roll.**

### **D. Academic Classrooms for students and adult continuing educational needs.**

### **E. Business Clients provide classroom environment to allow for the training of personnel. Business personnel will receive training on Job Functions / Career Path Guidance; Vendor Products; Standards and Procedures; Product / Application Manuals; Certifications will be awarded for successful completion, as are credits for degree related courses.**

**INITIAL PROCESS:****A. Industry Questionnaire on Business / Training needs:**

1. One - Five year Training Requirements.
2. Curriculum Development.
3. Certifications and Credits achieved from course completion.
4. Job placement potential.
5. Work / School internships.

**B. Vendor Questionnaire on products and available training materials.**

1. Products.
2. Training materials.
3. Certifications provided by Lehigh University.
4. Updates and enhancements to maintain currency.

**C. Academic credits.**

1. Credits for successful course completion provided by Lehigh University.
2. Degree / major college level training in response to business and vendor needs.

**D. Course Offerings.**

1. Broker available courses (vendor, college, personnel service firm).
2. Develop / Merge courses into curriculum.
3. Create Internet / Intranet based training services.
4. Provide academic and business communities with access to courses.
5. On-site training can be provided if necessary.

**E. Certification Offering:**

1. DRII (ABCP, BCP, MBCP);
2. PMI (Certified Project Manager);
3. ITIL, COSO, CobIT;
4. ISSCP (Information Security Systems Certified Professional – ISO27000));
5. Compliance and Regulations (GLB, HIPPA, SOX, EPA Superfund, Patriot Act, NFP 1600, PS-Prep, ISO2300, etc.);
6. Systems Development Life Cycle (SDLC) from Development, through Testing, Quality Assurance, Production Acceptance, Production, Support, and Maintenance;
7. Real-Time Data sharing, incremental backups, and encryption;
8. Vital Records Management and IT Operations; and
9. Data Center Backup at Recovery Site or company alternate location.

## **FUNDING**

### **A. Title I funding from government.**

1. 300,000 openings not being filled due to personnel skill requirements.
2. Job centers to retrain people to fill open positions.
3. Reduced Welfare and Increased Tax Rolls.
4. Cooperative agreement between business, government, vendors and personnel service firms.

### **B. Industry Funding to fill open positions.**

1. Job Functions.
2. Career Path Guidance and Assistance.
3. Personnel Training.
4. Placement Services.
5. Personnel Benefits.
6. Reduced Personnel Placement Fees.

### **C. Vendor Funding to advertise products and fill support personnel needs.**

1. Product Certifications.
2. Engineering Certifications.

### **D. Academic Funding to recruit students to new curriculum.**

1. Curriculum responds to business needs.
2. Students pay for class.
3. Virtual University Concept for greater ROI.
4. Student placement services in response to business needs.

### **E. Personnel Services Firms Funding.**

1. Career Path services.
2. Personnel Training.
3. Placement services.
4. Personnel Benefits.

### **F. Venture Capital and Personal Investments from Private Investors.**

## **TECHNOLOGY**

### **A. Web based services.**

- 1. Clients Post Jobs.**
- 2. Candidates Post Profiles and Resumes.**
- 3. Internet Search of Resumes and Jobs, based on skill keywords.**
- 4. Electronic Agents Match Jobs to Candidates.**
- 5. Email connects people to Business Jobs.**
- 6. Real Video / Audio clips about candidates and clients.**

### **B. Responding to Industry Needs.**

- 1. Skills Required to Fill Open Positions.**
- 2. Training Services.**
- 3. Career Path counseling.**
- 4. Continuing Education.**
- 5. Placement Services.**
- 6. Virtual Job Fairs via Video / Audio Clips.**

### **C. Leading Edge and Emerging Technologies**

- 1. Audio / Video and Text based courses.**
- 2. Chat Rooms.**
- 3. Simulators.**
- 4. Interactive discussions with other students and faculty.**

### **D. Medium to connect people to industry in response to business needs.**

### **E. Reduced costs and more up-to-date information, with school credits and vendor certifications to students who successfully complete courses.**

## **BENEFITS**

### **A. Prepare people for industry positions.**

- 1. Real world experience through Help Desk and Case Study participation.**
- 2. Career Path Assistance in response to industry needs.**
- 3. Vendor Certifications.**
- 4. School Credits.**

### **B. Career Path Counseling.**

- 1. Job Functions and Job Simulations.**
- 2. Vendor Product Training and Certifications.**
- 3. School Credits and Degree Programs.**

### **C. Interactive Training via Web Technologies.**

- 1. Connect at work or at home via PC.**
- 2. Simulations assist students in their understanding of materials.**
- 3. Work / Classroom Internships.**
- 4. Certifications and Credits applied towards Degree.**

### **D. Placement Services.**

- 1. Permanent.**
- 2. Consulting / Temporary.**

### **E. Personnel Benefits.**

- 1. Insurance.**
- 2. Retirement.**

## **PHASED APPROACH**

### **A. Needs Survey.**

- 1. Business.**
- 2. Vendors.**
- 3. Government.**
- 4. Academia.**
- 5. Personnel Service Firms.**
- 6. Clients.**

### **B. Develop Curriculum and Syllabus.**

- 1. Entry Level through Senior Level personnel training services.**
- 2. Interface with Business, Government, Vendors, Academia, and Personnel Firms via Web to support training and business needs.**

### **C. Pilot System.**

- 1. Cross-section of participants.**
- 2. Train Students.**
- 3. Monitor results of training through metrics and industry feed-back.**
- 4. Upgrade courses, as needed.**

### **D. Roll-Out System.**

- 1. Provide courses to General Public and Business Community.**

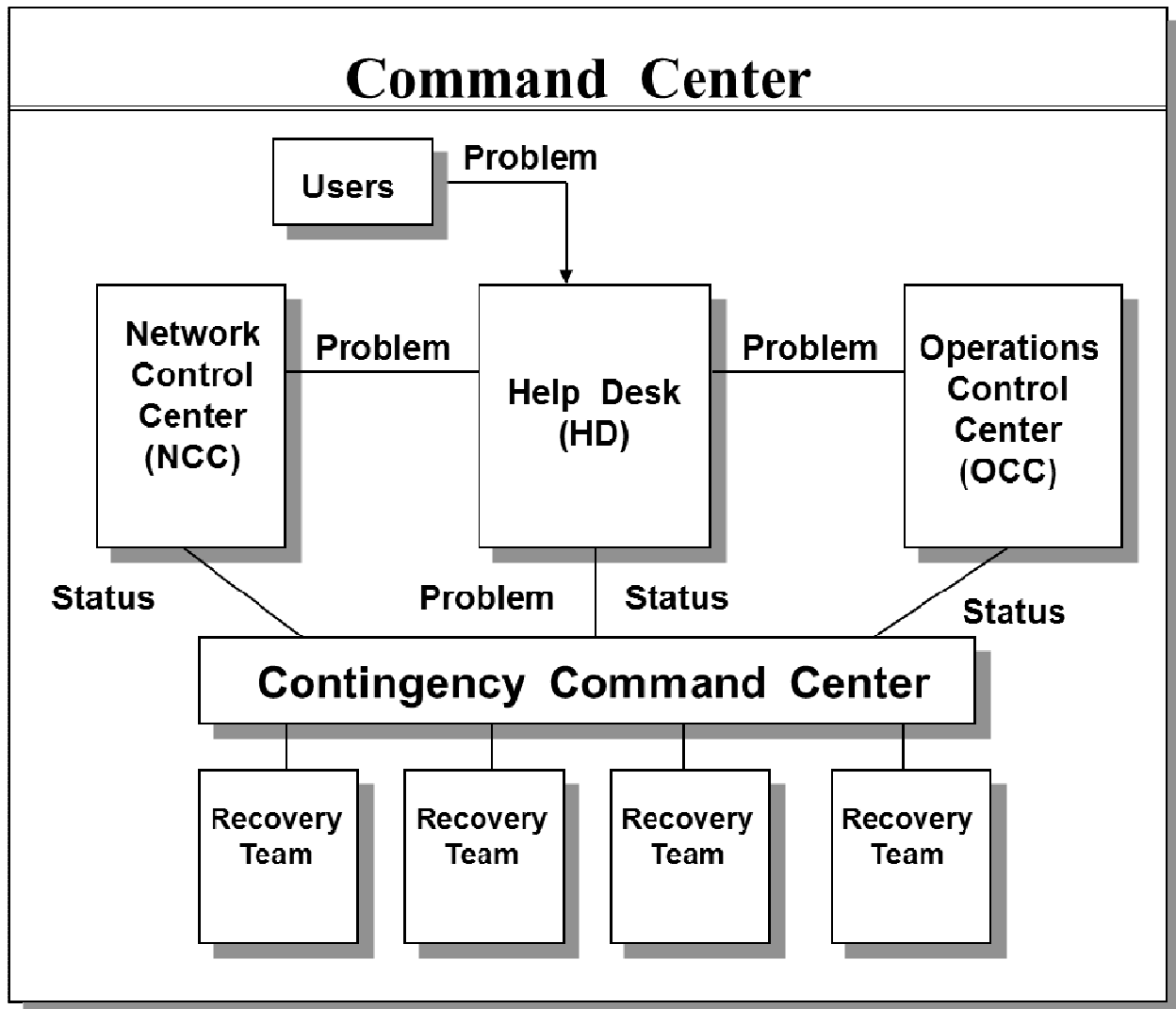
### **E. Support and Maintenance.**

### **F. Enhancements and new course offerings.**



## HELP DESK ENVIRONMENT

Build a Help Desk / Command Center to support local businesses and alumni firms.



1. **Level I – Students take calls, log problems, follow scripts to repair previously encountered problems, or route problem to second level support.**
2. **Level II – Graduate students or senior help desk personnel review problems and attempt to repair any problem associated with an in-house product or service.**
3. **Level III – vendor level support to repair problems with vendor products / services that were detected and reported to the Help Desk.**
4. **Level IV – Support associated with recovery procedures needed to relocate products / services used by companies / personnel supported through the Help Desk.**

## **WHERE DO WE GO FROM HERE**

### **A. Formulate consortium and obtain funding.**

1. Identify participants (University, Businesses, Vendors, etc.).
2. Consulting money for survey and needs analysis.

### **B. Conduct Survey.**

1. Create survey of business and vendor needs.
2. Identify vendor certifications and class subjects.
3. Create survey of personnel and educational needs.
4. Develop projections of when skilled people will be needed (1-5 year plans).
5. Define presently available staff and salary requirements.

### **C. Evaluate Needs.**

1. Business projects that are affected by shortage of skilled people (i.e., Y2K).
2. Cost of recruiting permanent staff and consulting personnel.
3. Affect on personnel retention because of educational deficiencies.
4. Definition of vendor product and business specific educational needs.
5. Development of curriculum to fulfill business needs by upgrading personnel skills.

### **D. Develop Course Materials and Curriculum.**

1. Courses developed in accordance to curriculum.
2. Development backbone and plug-in course modules.
3. Client / Server environment for course material distribution and maintenance.
4. Alumni receive updates as they become available.
5. Testing and certification process in place.
6. Estimated cost of \$25K per course day for development.
7. Maintenance fee may be applied for updates and course enhancements.

### **E. Pilot and Roll-Out.**

1. Educational system backbone in place (hardware / software / products).
2. Curriculum courses created and personnel enrolled in courses.
3. Personnel evaluations to ensure course materials and classes provide adequate training to fulfill business job functional responsibilities.
4. Problems areas and deficiencies isolated and methods for improving courses identified.
5. Upgraded course curriculum completed and tested satisfactorily.

### **F. Support / Maintain / Enhance system going forward.**