Information Technology Skills Gap Forum
Friday, March 22, 2013
hosted by the

at Bellevue College

CoE for ICT, as an information resource and solutions-provider regarding model educational programs, supplies:

- Best practices for ICT education and training
- **Up-to-date research, including IT trends that impact hiring and educational needs and business growth across industry sectors in Washington State**
- Information dissemination
- K-20 faculty professional development conferences and student events

IT Skills Panel Industry Forum Agenda

Friday, March 22, 2013

2:00 – 4:00 p.m.

East/West Board Room, B201 (A & B)

Bellevue College, Bellevue Washington

Facilitated by: Maureen Majury, M.Ed., Director for the Center of Excellence and Computing Technology, Terryll Bailey, The Allison Group, & Dr. Michele Royer, Bellevue College

I. **Welcome and introductions**

II. **Overview of current and future IT employment trends in IT and IT-enabled industries identified by the Center of Excellence**
   - Overview of current and future IT employment trends in IT and IT-enabled industries identified by the Center of Excellence
   - The need for qualified IT employees (Slides 4-7)
   - Technology trends that impact current or create emerging IT career pathways
     - The technology trends themselves
     - Impact on industry itself
     - Impact on IT career pathways
   - Skills Gaps and results from the IT Skills Gap questionnaire
   - How the Center works with its industry partners, including return on investment

III. **Facilitated discussion with industry professionals to verify accuracy of current workforce demand and trend data**
   - Where is industry in alignment with the information presented in the overview
   - What should colleges be doing to better prepare students to meet current and future IT workforce demand

IV. **Association of Washington State Business (AWB)**
   - AWB involvement with community and technical colleges

V. **Closing remarks**
   - Community and Technical College Systems contributions to the State's economy (video)
   - Thank you and general comments
   - Complete paperwork for stipend and travel

Note: Agenda is subject to change

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Welcome & Introductions

Please share with us your:

- **Name**

- **Title**

- **Organization**

The Need for Qualified IT Professionals (Employees)
& Why IT Jobs Are Relatively Safe in Uncertain Economic Times

Our economy has been transformed, with tech now the state's major economic driver. The Washington Research Council reports that technology-related employment increased 119 percent over the past two decades, while the underlying state economy grew only 14 percent. The IT sector created two-thirds of Washington's job growth and more than half of employee-compensation growth over that time. It now represents 27 percent of all jobs in the state. Highly skilled employees are important for all employers, but they're the lifeblood of high-tech. *Susan Sigl, left, is the president and CEO of the Washington Technology Industry Association. Bryan Mistele is the co-founder, president and CEO of traffic information provider INRIX.* (**Source:** *The Seattle Times*, March 1, 2013)

Total openings due to growth in computer science and engineering are expected to number 3,600 per year; at present, our higher education system annually produces fewer than 650 degrees in the computer specialist fields. Washington must significantly expand bachelor's degree production over the next decade, targeting job-creating fields and those that fulfill a critical need in our economy: computer science, engineering, life sciences, medical research, nursing, and math and science secondary teaching. *...Washington State's Technology Alliance*

Markets With The Most Opportunity

Technology jobs can be found in virtually every U.S. market, and given the nature of the work, many roles may allow for telecommuting. However, certain U.S. markets have a strong concentration and a substantial volume of IT jobs compared to total employment. The following 10 metropolitan areas are expected to grow their IT employment by more than 8 percent in the next five years:

- Atlanta, Austin, Texas, Baltimore, Boston, Columbus, Ohio, Dallas, San Francisco, San Jose, Calif., **Seattle,** Washington, D.C. (**Source**: Careerbuilder.com, 2012, Story filed January 02, 2013)

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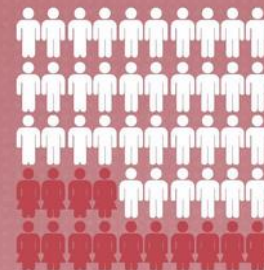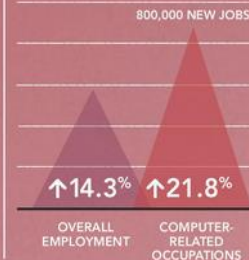
SPOTLIGHT ON TECHNOLOGY
THE 'T' IN STEM

Experts agree that STEM jobs are essential to a growing economy and vital to our nation's competitiveness. Technology, or computer-related occupations, make up 49% of overall STEM employment and are expected to grow at a much stronger rate compared to overall employment over the next several years. Demand for these workers is being driven by the increased need for businesses, government and other organizations to design, adopt and leverage the latest technologies. While workers in these fields should possess strong problem-solving, analytical and communication skills, these occupations also offer great opportunities for individuals that want to push the boundaries of technology by using their imagination and creativity.

OPPORTUNITY MARKETS

The top 10 metropolitan areas that have a strong concentration and a substantial volume of IT jobs (compared to total employment) and are predicted to grow their IT employment by more than 8% in the next five years.

- SEATTLE
- BOSTON
- SAN FRANCISCO
- SAN JOSE
- COLUMBUS
- BALTIMORE
- WASHINGTON
- DALLAS
- ATLANTA
- AUSTIN

EXPECTED JOB GROWTH THROUGH 2020

800,000 NEW JOBS

↑14.3% — OVERALL EMPLOYMENT

↑21.8% — COMPUTER-RELATED OCCUPATIONS

13.8%
OF COMPUTER SCIENCE BACHELOR DEGREES GRANTED TO WOMEN IN 2009-2010.

LABOR DEMAND FOR COMPUTER AND MATHMATICAL SCIENCE

The average number of advertised vacancies in this occupational category continually outnumbers job seekers by over

3:1
↑

TOP 10 JOBS BY EMPLOYMENT

1. Computer Support Specialists
2. Software Developers, Applications
3. Computer Systems Analysts
4. Software Developers, Systems Software
5. Network and Computer Systems Administrators
6. Computer Programmers
7. Computer and Information Systems Managers
8. Information Security Analysts, Web Developers, and Computer Network Architects
9. Computer Occupations, All Other
10. Database Administrators

TOP STARTING SALARIES

Two out of the top five starting salaries for all majors went to computer grads who are starting off with the following average salaries:

COMPUTER ENGINEERING MAJORS
$64,499

COMPUTER SCIENCE MAJORS
$63,402

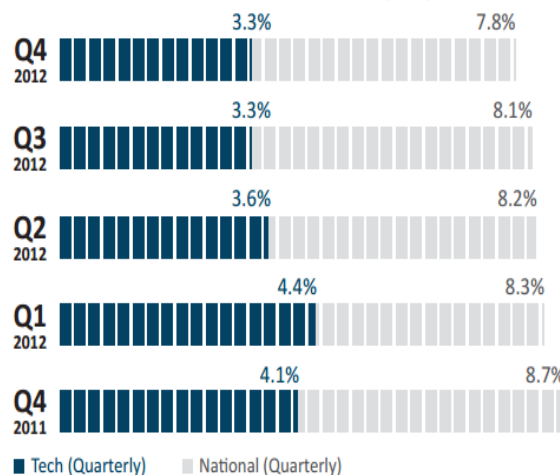## THE TOP 5 HOT JOBS BY GROWTH % (THROUGH 2020)

Job	Growth %
Software Developers, Systems Software — Average annual salary (2011): $100,420	32.4%
Database Administrators — Average annual salary (2011): $77,350	30.6%
Network and Computer Systems Administrators — Average annual salary (2011): $74,270	27.8%
Software Developers, Applications — Average annual salary (2011): $92,080	27.6%
Computer Systems Analysts — Average annual salary (2011): $82,320	22.1%

COMPUTER SCIENCE/MATHEMATICS BACHELOR DEGREE DEMOGRAPHICS

WHITE 65%	BLACK 10%	ASIAN/PACIFIC IS. 9%	OTHER 8%	HISPANIC 7%	AMERICAN INDIAN 1%

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Tech Employment Snapshot

Unemployment Rates

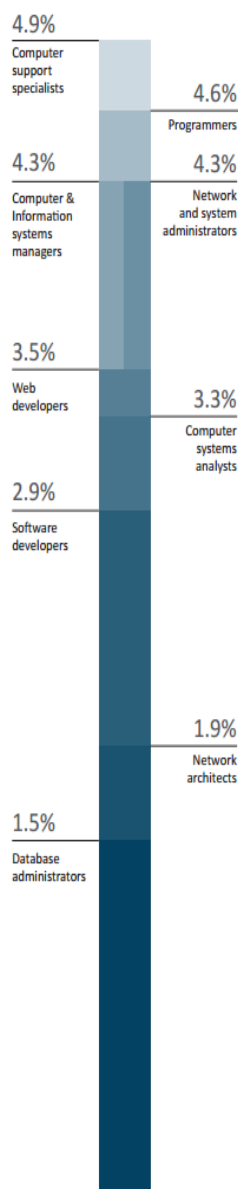|	Tech (Quarterly)	National (Quarterly)
Q4 2012	3.3%	7.8%
Q3 2012	3.3%	8.1%
Q2 2012	3.6%	8.2%
Q1 2012	4.4%	8.3%
Q4 2011	4.1%	8.7%

■ Tech (Quarterly)   ☐ National (Quarterly)

Source: Bureau of Labor Statistics; overall unemployment rate is seasonally adjusted – Technology (computer and math) is not seasonally adjusted.

This recovery for tech professionals stands alone. More tech jobs have been created in the three and a half years since the end of the Great Recession than under the same recovery timelines in either 1991 or 2001.

The largest component of those job gains is technology consulting[1] which added another 21,100 positions in Q4 2012 for a total of 80,500 positions in 2012. This past year marks the best year for this category since 2007, according to the Bureau of Labor Statistics. Partially offsetting those gains, were job losses for the year in manufacturing of computer and electronic products (10,100) and data processing and hosting (1,600), despite gains in the latter category during the fourth quarter.

> **"The unemployment rate for technology professionals steadied in the fourth quarter at 3.3%."**

The unemployment rate for technology professionals steadied in the fourth quarter at 3.3 percent. That's still less than half the national average which improved to average 7.8 percent in the fourth quarter.

[1] Bureau of Labor Statistics, Professional and Business Services, Computer systems design and related services

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|	
4.9% Computer support specialists	
	4.6% Programmers
4.3% Computer & Information systems managers	4.3% Network and system administrators
3.5% Web developers	
	3.3% Computer systems analysts
2.9% Software developers	
	1.9% Network architects
1.5% Database administrators	

Source: Unemployment rates, Q4 2012, Bureau of Labor Statistics, Household Survey

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Jobs Created/Lost in Q4 2012

Computer systems design
Professional and Business Services - 1,638,300 employed*

+21,100 from Q3*
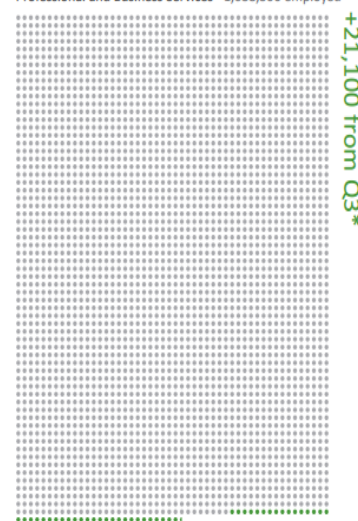
Computer and electronic products
Manufacturing - 1,097,300 employed*

-1,800 from Q3*

Data processing and hosting
Information - 240,900 employed*

+700 from Q3*

· = 500 people   · = gained   · = lost

* preliminary

Source: Change in number of employed positions from Q3 to Q4 according to the Bureau of Labor Statistics' Establishment Survey

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Monthly Average of Quits
(Professional and Business Services)

Q4 2012
(to date)
388,000

405,000 monthly (10-year average)

Source: Bureau of Labor Statistics, Job Openings and Labor Turnover Survey, Professional and Business Services, average preliminary Voluntary Quits, October and November 2012.

The strong jobs recovery in technology hasn't translated into more willingness or ability of workers to leave their jobs.

During the first two months of the fourth quarter, 388,000 employees in professional and business services quit their positions on average, according to the Bureau of Labor Statistics JOLTS report. While that's up slightly from the third quarter average of 378,000 per month, it's still well below the 10-year average of 405,000.

The issue? According to the BLS, "the number of quits has exceeded the number of layoffs and discharges for most of the 11-year JOLTS history." That changed during the Great Recession and is yet to recover.

In the first two months of the fourth quarter, layoffs and discharges in professional and business services averaged 380,000. That's the very first quarter in 2012 where the pattern broke or the only quarter when voluntary departures were higher than layoffs in professional and business services.

Washington State Demand By IT Career Pathway
Source: EMSI, March 2013

- Information Security Analysts, Web Developers, and Computer Network Architects
- Computer and Information Systems Managers
- Computer Systems Analysts
- Software Developers, Applications & Systems Software
- Network and Computer Systems Administrators
- Computer Programming
- Database Administrators

Washington State demand by county (map for each)

Projected Change (Demand) for each Occupation: Washington State v. Nation

Hand out: Maps and Projected Demand

SOC	Description	▼ 2012 Jobs	2017 Jobs	2012 Annual Openings	Median Hourly Earnings	2012 National Location Quotient
15-1132	Software Developers, Applications	34,141	38,735	1,553	$46.57	2.55
15-1133	Software Developers, Systems Software	16,370	19,139	818	$46.18	1.71
15-1121	Computer Systems Analysts	15,572	17,621	804	$39.40	1.19
15-1131	Computer Programmers	13,181	14,492	650	$41.06	1.48
15-1179	Information Security Analysts, Web Developers, and Computer Network Architects	12,914	14,743	644	$34.43	1.49
11-3021	Computer and Information Systems Managers	10,210	11,507	471	$58.37	1.37
15-1142	Network and Computer Systems Administrators	10,147	11,582	501	$34.47	1.23
15-1141	Database Administrators	3,039	3,604	180	$40.27	1.10
	Total	115,572	131,422	5,622	$43.38	

13.7 % increase between 2012 and 2017 (nationally 10.1), or 15,850 projected job openings, or 3,170 jobs each year.

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The Big Four: Mobile Technology, Business Analytics, Cloud Computing, and Social Businesses

Gartner's 2013 Technology Trends and Why You Should Care

Personal Cloud, Hybrid IT and Cloud Computing, In Memory Computing

•The personal cloud will gradually replace the PC as the location where individuals keep their personal content, access their services, etc. The personal cloud shifts the focus from the client device to the cloud-based services delivered across devices.

•IT staffs have been asked to do more with less, IT departments must play multiple roles in coordinating IT-related activities, and cloud computing is now pushing that change to another level. The execution of certain types of hours-long batch processes can be squeezed into minutes or even seconds that can be delivered to internal or external users in the form of cloud services.

Implications for the IT Industry:

•While this trend focuses more on customer's use of technology, it is important to consider what that means for companies as costs continue to drop for a variety of cloud services.

•Organizations should strongly consider an investment in cloud technologies for a variety of IT services. Or, how customers might migrate to less expensive cloud hosting options.

•Most organizations can relate to the pressure of doing more with less. And cloud computing, while receiving a ton of hype the last few years, is a very legitimate way for organizations to take advantage of sophisticated technology tools in a very cost-effective way without having to invest in much capital at all. In some ways, cloud computing could transform the many small- to mid-sized businesses sector.

•With In Memory Computing will enable access to actionable information about your database of customers more quickly than ever. Speed + knowledge = greater chance of success.

Strategic Big Data and Actionable Analytics

Big Data is moving from a focus on individual projects to an influence on enterprises' strategic information architecture. Analytics is increasingly delivered to users at the point of action and in context. With the improvement of performance and costs, IT leaders can afford to perform analytics and simulation for every action taken in the business.

Implications for the IT Industry: Strategic Big Data coupled with smarter analytics is really the lifeblood of organizations – knowing all you can about customers to engage them in the most effective way possible. Strategic Big Data is the core of an information architecture that will help all aspects of an organization be truly integrated when it comes to marketing and customer service. With the improvement in performance and costs, however, now is a great time for businesses to *either start or expand* looking at ways to take advantage of analytics. We're entering a time when it's imperative for businesses to be able to set themselves apart, and anything that provides an edge is crucial. Over the years, analytics will be a disruptive game changer for many organizations.

Mobile Device Battles, Mobile Applications and HTML5

Mobile phones (smart phones) will overtake PC's as the most common Web access device worldwide, and that by 2015 more than 80 percent of the handsets sold in mature markets will be smartphones.

Implications for the IT Industry: Mobile is real. Organizations without a mobile strategy will struggle to fully engage with supporters in a meaningful way. Mobile app development and mobile app strategies will become increasingly important as the mobile world continues to grow in complexity. Organizations that take a more aggressive role with their mobile strategy will be best prepared to fully engage customers.
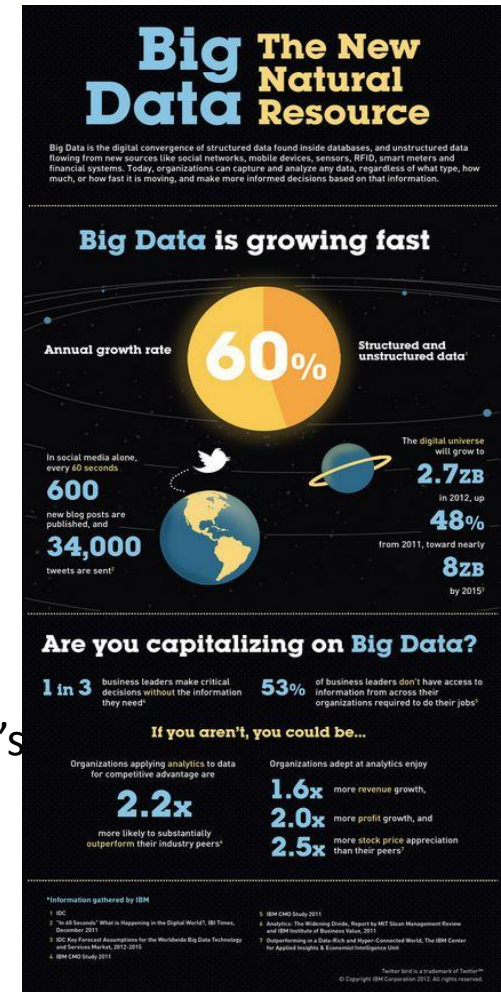
The Internet of Things

The Internet of Things (IoT) is a concept that describes how the Internet will expand as physical items such as consumer devices and physical assets are connected to the Internet (things such as watches, cars and refrigerators).

Implications for the IT Industry: The ability to use digital devices to make financial transactions (or to even simply engage) opens up a whole new world of possibility for organizations to consider.

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The Big Four: Mobile Technology, Business Analytics, Cloud Computing, and Social Businesses

- Technology outranks all external factors, even market forces and the economy, as the top driver impacting their organizations over the next three to five years.

- Contributing to this transformation are four pivotal information technologies that are rapidly reshaping how enterprises operate: mobile technology, business analytics, cloud computing and social business. The magnitude and speed of these shifts is staggering. By the end of 2012, mobile devices are expected to outnumber people.

- Sources of analytical insight continue to multiply, with the world generating 15 petabytes of new data every day – that's roughly eight times the information housed in all the academic libraries in the United States.

Source: IBM Center for Applied Insights

Big Data: The New Natural Resource

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Nine Occupations, Linked to the Big Four, New Trends to Watch For, and the Skills Gap (Technical Knowledge and Skills in Demand) as Identified by Our Industry Experts

- Computer Systems Analysts (Social, Analytics)
- Software Developers, Systems Software (Mobile, Social)
- Web Developers (Mobile, Social, Analytics)
- Information Security Analysts (Mobile, Cloud)
- Computer Network Architects (Cloud)
- Network and Computer Systems Administrators (Cloud, Business)
- Computer and Information Systems Managers (Mobile, Cloud, Analytics)
- Computer Programming (Mobile, Cloud, Social)
- Database Administrators (Mobile, Cloud, Business)

Growing skill gap

Only 1 in 10
organizations has all the skills
it needs to be successful

Roughly 3 out of 4
students and educators report
a moderate to major gap in their
ability to meet the skill needs
of the IT workforce

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Software Developer (Applications/Systems)

With 2012 coming to an end and everybody talking about what lies ahead in 2013, InfoQ has conducted a quick poll amongst its editors about the trends that have a good potential to get significant traction or even dominated the software development community during the next year. These trends include everything from specific programming languages, platforms, development methodologies, and more.

Source: InfoQ

Option	Adoption Readiness	Value Proposition
HTML5 and JavaScript as a Platform	77%	77%
Cloud Computing	77%	78%
Mobile Applications and Mobile-first UIs	78%	76%
NoSQL displacing RDBs	62%	65%
Big Data and Analytics	68%	71%
App Stores and Marketplaces	72%	68%
Enterprise Wide Agile Adoption	66%	69%
DevOps Bringing Dev and Ops Closer	68%	67%
Lean Startup	65%	69%
Social and Contextual User Experience	66%	66%
Resurgence of SOA	64%	62%
Natural User Interfaces	59%	66%
Application Lifecycle Management	70%	68%
RDBs displacing NoSQL	57%	53%
Hypermedia and Real-Time APIs	64%	65%
Resurgence of C++	57%	54%

Total votes: 1079
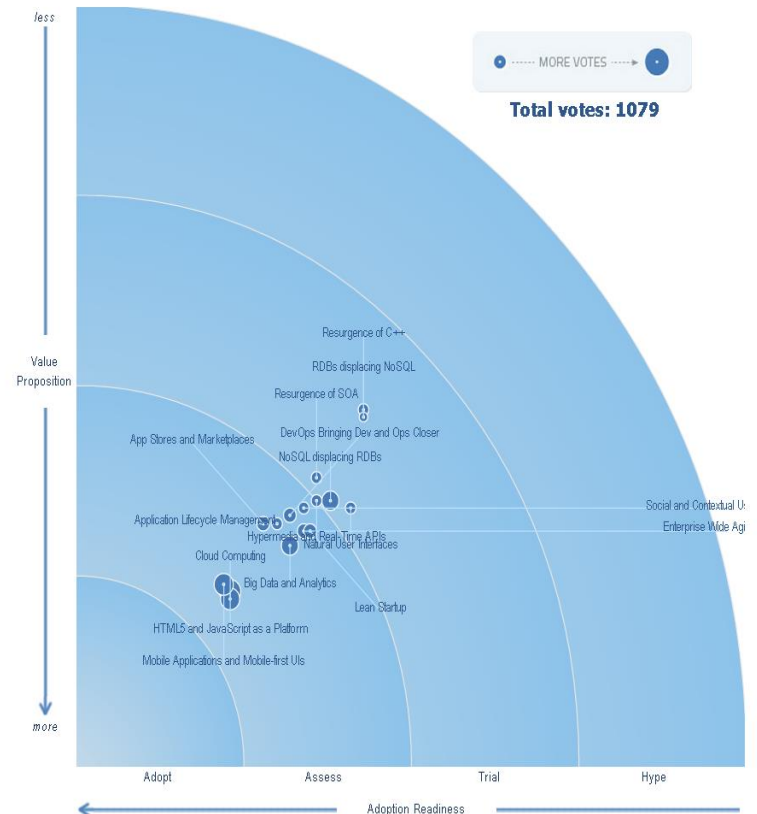
Computer Programming (Mobile, Cloud, Social)

Distributed computing
Given targets such as web applications, mobile and big data, the notion that a program only involves a single computer has disappeared. For the programmer, that means we must grapple with problems such as concurrency, locking, asynchronicity, network communication and protocols.

Data computing
The prevailing form of programming today, object orientation, is generally hostile to data. Its focus on behavior wraps up data in access methods, and wraps up collections of data even more tightly. In the mathematical world, data just is, it has no behavior, yet the rigors of C++ or Java require developers to worry about how it is accessed.

As data and its analysis grow in importance, there's a corresponding rise in use and popularity of languages that treat data as a first class citizen. Obviously, statistical languages such as R are rising on this tide, but within general purpose programming there's a bias to languages such as Python or Clojure, which make data easier to manipulate. Source: Search Networking

Trends in Programming Technology
you might want to keep an eye on
by InfinIT - Innovationsnetværket
Dec 04, 2012

Three Trends

- Declarative programming languages in vogue again
  - Especially functional
- Dynamic Programming languages are gaining momentum
- Concurrent Programming languages are back on the agenda

Software Developers, Applications/Systems Software (Mobile, Social, Analytics) & Computer Programming (Mobile, Cloud, Social)
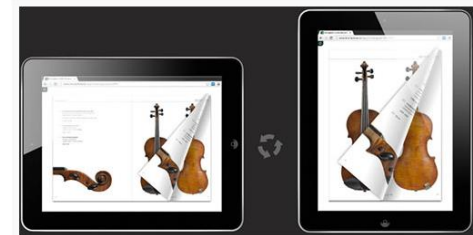# Results from Questionnaire

Programming, Engineering, Application Development Planning	Important %	Not Important %	Difficult %	Not Difficult %	Demand Seattle Metro Keyword, Dice.com (2,528 jobs)
Programming	88%	8%	58%	29%	21%
C	38%	57%	33%	57%	33%
C#	64%	36%	41%	55%	20%
C++	50%	55%	36%	64%	20%
Security	88%	12%	72%	20%	15%
Java	77%	27%	46%	50%	29%
Integration	83%	17%	69%	22%	20%
SQL	82%	18%	55%	41%	30%
Development (software)	83%	17%	65%	26%	69%
Engineering	83%	21%	63%	29%	32%
Testing	96%	4%	54%	29%	33%
Implementation	91%	9%	55%	27%	30%

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Web Developers: Skills & Trends to Watch for 2013

- **Mastering Mobile Technology**
- **Unit Testing**
- **Cloud computing**
- **HTML5**
- **Python or Ruby**
- **CSS3**
- **Responsive Pages**
- **JavaScript & Jquery**
- **Location based Computing**
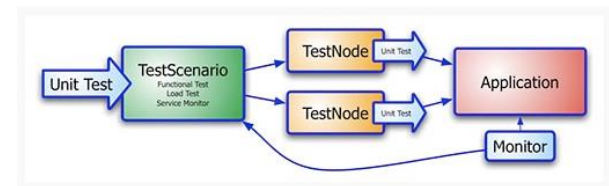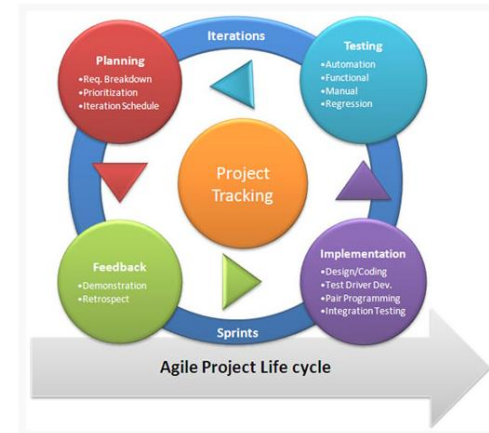
Source: Smashing Hub

Web Developers (Social, Mobile, Analytics)
Results form Questionnaire

Web Technologies JavaScript	Important %	Not Important %	Difficult %	Not Difficult %	Demand Seattle Metro Keyword, Dice.com (2,528 jobs)
Security	79%	21%	50%	30%	15%
Scripting	83%	17%	35%	48%	18%
Web Services	92%	8%	40%	40%	19%
Troubleshooting	76%	20%	36%	40%	13%
Planning	76%	24%	40%	36%	17%
Implementation	84%	12%	52%	28%	30%
HTTP	67%	33%	25%	63%	31%
HTML5	61%	39%	48%	44%	5%
Testing	96%	4%	58%	25%	33%
Design	88%	12%	50%	33%	58%
Application Development	87%	13%	39%	48%	50%

Information Security Analysts
6 Information Security
Trends for 2013

Source: InformationWeek Security

- **Mainstream Cloud and Mobile Adoption Seeks Security**

- **Businesses Begin Sandboxing Smartphone Apps**
  - **Sandbox:** A security mechanism for separating running programs. It is often used to execute untested code, or untrusted programs from unverified third-parties, suppliers, untrusted users and untrusted websites.

- **Cloud Offers Unprecedented Attack Strength**
  - just as legitimate companies are using the cloud to do great things, of course cyber attackers are taking notice as well -- and they can cause significant damage.

- **Post-Flashback, Cross-Platform Attacks Increase**

- **Hackers Target QR Codes, TecTiles**
  - One of the more innovative -- as well as simple and inexpensive -- attacks to emerge over the past year involves fake QR codes, which attackers have printed out and used to cover up real QR codes on advertisements -- especially for financial services firms.

- **Digital Wallets Become Cybercrime Targets**

Computer Network Architects (Cloud) &
Network and Computer Systems Administrators (Cloud, Business): Analysts Make Networking Predictions for 2013

Data center networks will continue to wrestle with the limitations of spanning tree protocol in 2013, but enterprises that move to alternatives like network fabrics will find roadblocks to scalability. Meanwhile, enterprises will use Ethernet exchanges to build hybrid cloud environments and cutting edge micro-electromechanical systems (MEMS)-based photonic switches will start to make some noise in the data center.

In 2013, **network security** vendors need to develop third-party ecosystems that help enterprises correlate data among the various components of their security architecture. Also, network security pros will need to sort through the software-defined networking (SDN)hype to figure out how secure these new technologies are. Meanwhile, enterprises will accelerate their adoption of next-generation firewalls and advanced threat protection systems.

Emerging virtual overlay network technology will force **network management** vendors to develop tools to monitor these new environments in 2013. Meanwhile, enterprises will demand better visibility into their public cloud resources and virtual desktop infrastructure deployments.

What's in store for **software-defined networking**? IDC analyst Brad Casemore predicts adoption will grow among service providers and cloud providers; vendors will battle each other in Layer 4-7 network services and SDN controllers; and OpenFlow may evolve, but very slowly. In the longer term, IDC projects that the SDN market will reach $3.7 billion by 2016.

The traditional method of telneting into networking devices and configuring them through the command line interface (CLI) is dead. Developing an infrastructure that truly serves the business and users involves a lot of software interfaces that need customization and algorithmic engines that perform workflows and analytics. Find your **network software engineers** from the individuals (inside or outside the company's networking team) who thrive in a dynamic environment, are highly social, embrace new technology, and always seek new, creative ways to use that technology.

Source: Search Networking

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Database Administrators & Computer Information Systems Manager: 2013 Trends

Big data: Recognize the benefits of big data technology solutions as tied to business goals and objectives, as this is more important than simply finding new ways of processing data.

Modern information infrastructure: Enabling technology infrastructure, helping information producers and consumers organize, share and exchange data in real-time and on the move as companies that establish a road map for this early on will be most successful.

Semantic technologies: The ability to extract meaning from data and information - not a new trend, say Gartner - but something that is growing again because of a renewed business requirement for monetizing information.

The logical data warehouse: Data warehouse (DW) architecture is evolving - to include fully enabled data management and information processing platforms.

NoSQL DBMSs: Key-value stores, document-style stores, and table-style and graph databases — are designed to support new transaction, interaction and observation use cases involving web scale, mobile, cloud and clustered environments will see more organizations investigate and experiment.

In-memory computing: This will enable user organizations to develop applications that run advanced queries on large datasets - Gartner says that this will open up partially unexplored opportunities for business innovation through real-time analysis of big data.

Information valuation/infonomics

Information valuation is the process by which relative value or risk is assigned to a given information asset or set of information assets. A more formal approach to information valuation is beginning to take hold with organizations moving on from just thinking about information as an asset, but also to actually value and treat it like an asset.

Computer Network Architects (Cloud)
Information Security Analysts (Mobile, Social, Cloud),
Database Administrators (Analytics, Cloud, Mobile)
Computer and Information Systems Managers (Mobile, Cloud, Analytics)
Results from Questionnaire

Business Intelligence, Data Analytics, Database	Important %	Not Important %	Difficult %	Not Difficult %	Demand Seattle Metro Keyword, Dice.com (2,528 jobs)
Integration	100%	0%	72%	20%	20%
Security	88%	12%	72%	20%	15%
Planning	88%	12%	64%	28%	17%
Reporting	79%	21%	42%	54%	13%
SQL	88%	12%	40%	52%	30%
Testing	92%	8%	71%	25%	33%
Implementation	88%	12%	60%	32%	30%

Computer Network Architects (Cloud)
Information Security Analysts (Mobile, Social, Cloud),
Database Administrators (Analytics, Cloud, Mobile)
Computer and Information Systems Managers (Mobile, Cloud, Analytics)
# Results from Questionnaire (contd.)

Networking/Systems	Important %	Not Important %	Difficult %	Not Difficult %	Demand Seattle Metro Keyword, Dice.com (2,528 jobs)
Help Desk Technology	52%	47%	21%	65%	1%
Oracle	48%	52%	52%	35%	15%
Troubleshooting	84%	16%	44%	40%	13%
Planning	75%	25%	50%	38%	17%
Security	29%	21%	50%	38%	15%
Networking	83%	17%	44%	49%	19%
Windows	70%	30%	22%	70%	16%
Testing	95%	5%	70%	20%	33%

Skills Gaps
and results from the IT Skills Gap questionnaire

- Specific Results from the Questionnaire
- General Results from the Questionnaire

Hand-Outs
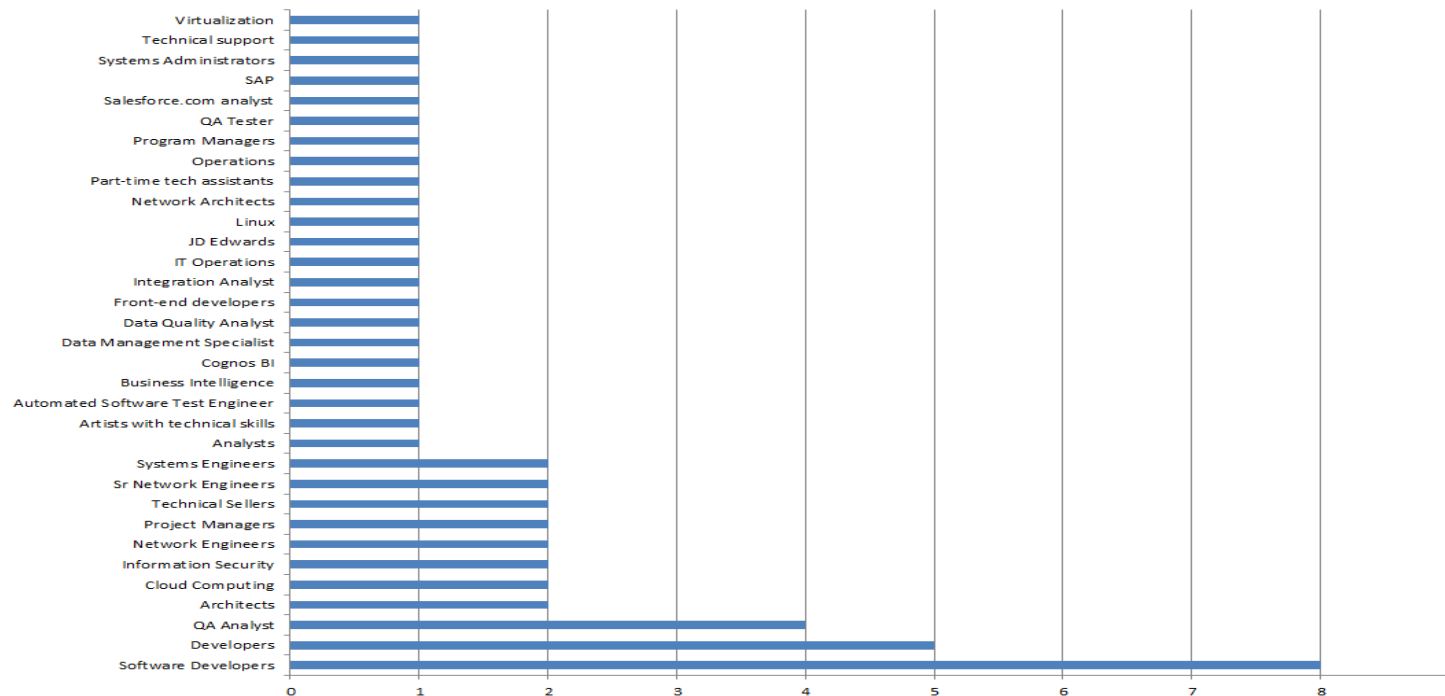
How the Center works with its industry partners, including return on investment

IT Futures Summit
Review of IT/CS CTC Program Reviews
CoE Advisory Board
The Life of an IT Professional: A Five Minute Story (video series)
2012 Self-Assessment and Annual Report

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Facilitated discussion with industry professionals to verify accuracy of current workforce demand and trend data

- We will form 3 small groups. You have been pre-assigned; please go to the room indicated next to your name.
- Your facilitated discussion will be approximately 1.25 hours long.
- We will then reconvene in the East/West Board room for some general feedback from the sessions, AWB's presentation, a viewing of the State Board's video *Community and Technical College Systems contributions to the State's economy*, and the stipend/mileage paperwork.
- Adjourn and much thanks!

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Creating Opportunities: Washington Community and Technical Colleges