

NCWIE Conference Queen's University

November 18-19, 2005

Technology with Curves

Jen Evans and Denise Shortt
Swing Think Inc.

A Little Bit about J & D



- Queen's Alumnae
 - Artsci '89 and '91
- Denise
 - Publishing, Harvard, Wired Woman Society, Author, Ryerson, entrepreneurship
- Jen
 - Retail, Tokyo, IT marketing and communications, DigitalEve, entrepreneurship

Sequentia and Swing



- Sequentia
 - Technology focused marketing communications agency
 - Profit Hot 50 Fastest Growing Companies in Canada this year (#28)
 - Clients include Intel, DataMirror, Kaboose, Alias, Packet-Tel
 - 15 employees and just over \$1 million in revenue (2005)
- Swing
 - Boutique agency focusing on marketing with women
 - Clients include Nike, Bioherbalai, Elixir, Youth in Motion, Life Network

The Women Behind the Biz



Denise Shortt– The Thinker. The Connector.

- Co-founder and former President of Wired Woman Toronto
- Harvard-educated researcher and former Professor at Ryerson University. Sits on national new media steering committees for CHRC (Cultural Human Resources Council of Canada), ACTEW and WIFT (Women in Film and Television)
- She is the co-author of two best-selling business books, *Technology with Curves: Women Reshaping the Digital Landscape* (HarperCollins, 2000)



Jen Evans– The Technologist. Never Stops Moving.



- President and Founder, Sequentia
- A media darling, appears regularly on ROB TV's Tech Tuesday panel
- Two-time finalist for Canadian New Media Awards
- Sits on Boards of White Ribbon Campaign, Computers for Schools and The Beach School
- Formerly Director of Marketing, Cognicase and a division of AT&T



Cara (Catharine) Fennell– The Strategist. The Career Mom.



- President and Founder, Market Yourself Smarter
- Formerly a corporate gal holding positions in New York as VP, Marketing, Bowne Internet Solutions and VP, Marketing, Mediconsult
- An entrepreneur at heart specializing in building communities of women, growing businesses, building brands and strategic marketing
- Chairs Allocations Panel for the United Way
- A provocative moderator who tells it like it is. Moderates all Market Yourself Smarter events

Technology with Curves



- Broad range of diverse career opportunities that exist for women in the tech sector
- How women can best prepare themselves for careers in the tech sector
- Strengths and skills required for successful job candidates within the tech sector
- Our own stories/career paths as well as showcase of engineers who are working successfully in tech sector today

What do you think your career will be like?



- How will the world be different in ten years?
- How will that impact your work?

Today's Reality



- Non-traditional careers and work environments are becoming commonplace
- Huge shift toward entrepreneurship as organizations become 'leaner and meaner'
- 9 to 5, cubicle environment is becoming less and less frequent
- Self-starters with initiative and common sense will do well in any environment

Technology is the future and innovation is the path that will take us there....

- Knowledge economy: diversity is critical
- Recruitment and outreach continues especially to candidates with engineering education/skill sets
- Role Models: success stories of engineers who are working in the tech sector

The Bad news!!



Barriers to Entry into IT :

- Engineering and IT sectors continue to be male dominated sectors (72.6% of the IT work force is male: 24.6% female)
 - Not improving! Women outnumber men on campuses by increasing ratios, but engineering numbers dropping
- Fewer Role Models and Mentoring Opportunities
- Negative stereotypes (Misinformation)
- Glass ceiling

The Good news!



- Under-representation of women suggests an untapped reserve of talent for IT
- Bottom-line solution for IT companies is to hire women! (fill the pipeline!)
- IT Employers are being encouraged to attract *you* and accommodating *your* needs. (i.e. accommodating work-family balance; diverse and inclusive work environments etc).

IT workforce: What we know



- The IT workforce has grown by 152.3% moving from 2.4% of the labour force in 1991 to 3.3% in 2001
- 47.3% of IT workforce has a university degree
- Engineering and computer science account for more than half of the university qualification of IT employees
- Relatively young workforce, more so in the private than public sector

IT workforce: What we Know



- IT workforce makes up 4.4% of the Labour Force in Ontario
- Ontario has the highest share of IT jobs
- IT earnings are almost 66% higher in Ontario which has the highest IT salaries in the country

IT workforce: What we know



- Most IT workers work in *large firms*
- *Half* of all IT workers are located in Montreal, Toronto and Vancouver
- Further 20% in Ottawa-Gatineau and Calgary-Edmonton
- Over 40% of provincial public sector IT workers are in Quebec

Most prominent areas of IT work are:

- Software
- Web/Internet/Intranet
- Database

Next cluster involves about 40% of all IT persons working in areas of:

- Hardware
- Network
- Systems (excluding security)

Information Technology (IT) Labour Market in Canada: Results from the National Survey of IT Occupations (SHRC, April 2005)

IT workforce: What we know



- Systems Security
- Ecommerce
- Interactive and Digital Media

Where the Women Are!



Engineers (except software)	9.0%
Software Engineers	13.0%
Technicians	14.8%
Programmers	16.7%
Managers	19.6%
Multimedia Developers	21.3%
Project Managers	24.9%

Where the Women Are!



Data	25.7%
Support	29.9%
Analysts	36.8%
Graphic Designers and Illustrators	60.8%
Writers	74.3%

Alternative pathways to IT



- One-third of IT employees reported that their first job after completing their education was *not* in the IT field.
- Many IT workers leave previous positions for *better pay*, but more often for *career development* or interesting projects, especially in case of younger persons
- Females often leave for conditions to accommodate *work-family balance*

Hiring and Retention Issues



Most recent stats: (2002)

- Highest rate of new hiring was for *software engineers, managers, technicians and graphic designers and illustrators*
- Lowest rate was for the two largest occupations— *programmers and analysts.*

Professional Designations



- On average of all IT occupations in private sector, 14% of employees had at least one professional credential
- Most common professional designation was Professional Engineer
- Others included:
 - Information Systems Professional (ISP)
 - Information Technology Professional (ITP)
 - Certified Technician (C Tech)
 - Certified Engineering Technologist (CET)

Getting a job in IT



- Source of job information mainly:
 - Internet websites
 - informal networking
 - help wanted ads in print media
- Most common recruitment methods in private sector:
 - employee referrals most common
 - word-of-mouth
 - informal networking
 - firm's website

Skill sets needed to succeed!



Multi-tasking and Multi-skilling

- IT workers expected to do a wide range of tasks that constantly change.
- Ever changing job requirements (*multi-tasking*)
- *Multi-skilling* is also essential as IT employers require a broad set of skills required to meet a range of tasks

Get personal!



Employers across all IT sectors/occupations stated that *interpersonal skills* considered MORE important than *technical skills*!!!

1. Personal/interpersonal skills ****
2. General IT skills
3. Business Skills

Communication: The Female Advantage!



1. Personal/interpersonal most commonly ranked as “very important” by IT employers:
 - Team work skills
 - Oral communication skills
 - Written communication skills
 - Leadership skills
 - Presentation skills

Get interpersonal!



- 25% of employees reported a need for training in each of 5 personal/interpersonal skills!

2. Technical skills most often identified by IT employers as “very important”:

- Analytical Skills*** (clearly ranked above all other skills across broad range of industries)
- Design Skills
- Programming
- Maintenance Skills
- Client Support Skills (particularly in Engineering and Related Services)

Don't forget your business skills!



3. Business and management skills most often identified by IT employers as “very important”:
 - Time management skills
 - Planning skills
 - Project management skills
 - People management

Recap!



- Analytical and communication skills are more important than narrow, specific technical skills!
- Individuals and educational institutions should consider this as they prepare for careers in IT.
- Experience and informal methods of skill acquisition are more important than formal methods and education.

The Learning Never Stops!



Top methods for acquiring technical skills:

- **Self Learning** (manuals, books, on-line tutorials)
- **On-the-job informal training** (co-workers, supervisors, resource people, friends)
- **Community college or University**
- **Employer-paid formal training**
- **Self-paid formal training**

Training



- One third of new hires require skills upgrading
- Slightly over 70% of employees reported receiving informal training in the last 6 months
- Most prominent type of informal training self-study

Informal methods of attaining skill sets



- Employers now beginning to encourage informal methods of on-the-job training:
 - mentoring
 - coaching
 - job rotation
 - teams
 - access to those with different types of experiences
 - recognising and rewarding the sharing and passing of knowledge acquired through experience.

“The Package”



- The “Package” that you’ll want to present to IT employers involves a combination of
 - experience
 - informal training
 - personal and interpersonal skills
 - analytical and communication skills (i.e. interactions with customers, suppliers, co-workers)
- The trick is to acquire it and impart it!!

Where the Careers Are



- Life sciences
 - Pharma, biotech
- Macro and micro
 - Nanotechnology, consumer electronics
- Epidemiology
 - How this relates to pharma
- ‘Hybrid’ engineers
 - MBA, LLB
 - CompSci
 - Engineering as ‘foundation’

Examples



- President of Interactive Agency – MBA
 - Mechanical
- Film producer and director
 - Electrical engineer
- Vice President, GAP
 - Mechanical engineer
- Novelist
 - Electrical engineer
- Patent lawyers
 - Mechanical engineers
- Lawyers
 - All types

We're all entrepreneurs!!



Approach any career path you take like an entrepreneur!

- Do something you love!
- Share information (online forums, blogs etc.)
- Take risks!
- Network (join organizations that interest you...go to events).
- Volunteer (great way give to community while also getting key experience and make contacts)
- Join organizations that interest you
- Tell your story! (market yourself smarter)

Did we mention the importance of networking?



NETWORKING is extremely important for women in the IT industry. Why?

- Male-dominated industry (boy's club)
- Education/ sharing information
- Finding job opportunities
- Upgrading skills/IT field requires constant learning
- Role Models/mentoring
- Create your Professional Identity

Check out these Women in Tech and Business networking organizations:

- Wired Woman Society (www.wiredwoman.com)
- Digital Eve (www.digitaleve.com)
- CWC (<http://www.cwc-afc.com/>)
- Market Yourself Smarter (www.marketyourselfsmarter.com)

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Thank you!

Feel free to contact us if you have any questions:

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