



IBM Healthcare and Life Sciences

Transitions and Survival Skills: Perspectives from a Career in Industry

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■ Today

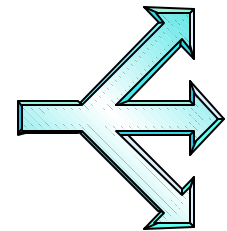
- Senior Manager and Senior Technical Staff Member, Solutions Development, IBM Healthcare and Life Sciences
 - Manage 3 development teams producing solutions for large Pharma and biotechs and solutions for medical informatics and medical imaging for healthcare customers
- 3 kids (3,6,8), IBM spouse

■ Formerly

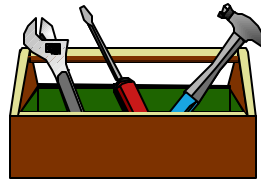
- Research Staff Member, IBM Research
- Lecturer, University of Liverpool, UK
 - Dept. of Materials Science and Metallurgy
- Postdoc., AT&T Bell Labs, Murray Hill, NJ
- Ph.D., (Physics), B.Sc., (Chemical Physics) University of Bristol, UK

What career transitions can we expect?

- From graduate school to first job
- From postdoc to "permanent" or regular position
- Switching jobs or switching field of study
- From researcher to manager
- From 1st line manager to middle-manager to executive
- Deciding to have kids and choosing to stay home or return to work
- Your next job is a single step in your career



What skills do we need?



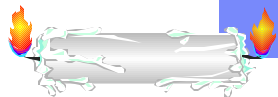
Communication



**Teamwork
Relationships
People
Management**



**Time
Management**



**Leadership
Independence
Initiative
Motivation
Responsibility**



Switching fields - from Physics to Software

■ From semiconductors to electronic commerce

- DB2 and DLLs
- Most valuable "transition skills" were:
 - knowledge of purchasing department processes
 - 10+ years of research experience
- what expertise or core competencies do you have?



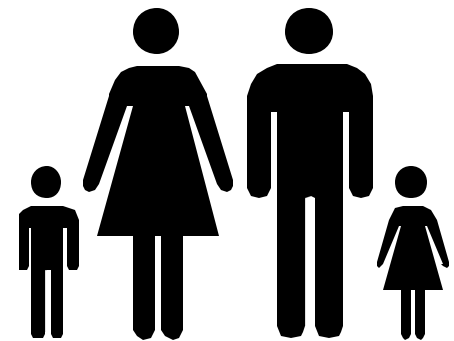
Switching fields - from software to Life Sciences

- **From financial services to Life Sciences**
 - Joining a new business unit in IBM
 - Most valuable "transition skills" were:
 - knowledge of DB2 and data management
 - knowledge of science, mainly chemistry & biology
 - understanding of the research process
 - Make tough decisions, fail early



Switching jobs - from scientist to Mom!

- **Having kids is a personal decision**
- **Take time to understand your employer's "maternity leave" policies and the Family & Medical Leave Act (FMLA)**
- **Speak with other women in your department - what worked for them? What failed?**
- **How much time do you take off? What about "reentry" to the workforce? Full time or part time?**
- **Will my career advancement grind to a halt?**
- **Good way to practice time management!**



People skills and teamwork are essential components for a successful career

- **90% of our jobs require people interaction**
- **Selling our products and ideas to our colleagues, managers and customers**
- **Working in a team and accomplishing work as a team**
 - Most science students work on their own projects in a lab
- **Value diversity - each of us brings unique skills, experiences, opinions**



Excellent communication skills are essential

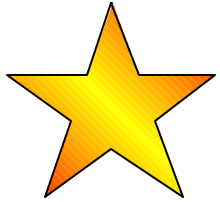
- **"When we write, we can delete as much as we want. When we SPEAK, there is NO delete key"**
 - "Technical people that can communicate have an advantage over the best techies in world."
- **Presentation skills**
 - Who is the audience, what decision needs to be made, "what's in it for me" ?
 - Tailor presentation to audience - don't assume they know everything you know
 - Clear, concise statements and explanations - don't put your audience to sleep
 - Practice, practice, practice
- **Mobile, networked, e-mail, chat - dominated world**
 - Face to face communication still extremely important

Time management is essential

- **Different jobs define different work styles**
- **Work days can be:**
 - "interrupt-driven", demanding, reactive, urgent
 - highly scheduled or extremely flexible
- **Manage your work/life balance**
 - Learn to juggle
 - Make time for yourself



Develop your leadership skills



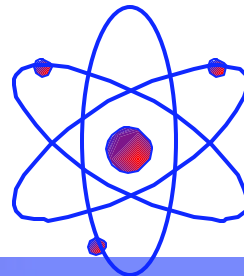
- **Innovation is driven by technical leadership**
 - creativity, breakthrough thinking, marketplace insight
- **Promote new ideas, drive change**
- **Identify new projects, drive new technology adoption**
 - Not all projects will succeed, be smart, analyze the marketplace opportunities, accept project failure
- **Learn the "system", understand the measurements processes and exploit for success**
- **Leadership skills differentiate you from your peers**

Survival skills for a Physicist



Conduct your personal inventory of survival skills

- **Physics is a great start**
- **Core set of technical skills**
 - thesis subject expert
 - experimental/theory
 - hypothesis, test, refine, conclusions
 - technical writing
 - technical presentations
 - ability to learn new stuff with an open mind
 - process design
- **Additional "extra" skills**
 - project management
 - design methodology
 - programming/IT skills
 - build/design labs/equipment
 - logical thinking
 - practical, organized behavior
 - teacher (TAs, seminars)



Physics is great training for a technical career

- **Comments from colleagues in industry - what skills from their Physics training have been valuable in industry?**
 - Ability to communicate a complex subject succinctly
 - Problem solving skills applicable to most domains
 - Ability to deal with messy, amorphous problems, ability to abstract simple models from complicated systems
 - Model and hypothesis building
 - Approaching a problem from different angles to solve it
 - Self-motivation, self-direction
 - Degree of comfort with technical material even when one doesn't completely understand it
 - Responding to "on your feet" questions that take a different perspective on the problem
 - No fear of asking questions