

Being an Entrepreneur at UBC

Presented to UBC
Electrical and Computer
Engineering

January 26, 2006

By Basil Peters

My Goals Today

- I'd like to change your life.
- And possibly make you a ridiculously large amount of money.
- Well, some of you anyways.
- I believe more students, staff and faculty at universities should start companies.
- I did and it worked out well for me.
- To put my comments in perspective, I need to start by telling you my story.

My Decade at UBC

- BCIT Diploma of Technology, 1973 (top of class)
- UBC BAsC Electrical Eng, 1977 (top of class)
- UBC Ph.D. in Electrical Engineering, 1982
- Won 8 scholarships including UBC's top (then)
- Elected three times to the Board of Governors
- Led the UBC Engineering Project to build an Electric Vehicle
- Also taught full 4 yr course in Electrical Engineering at SFU for 3 years

UBC Electrical Vehicle Project

- Back in the 70's the UBC Engineers always built cars.
- Started as a way to avoid a summer job.
- Ended up as UBC's largest student project (then).
- Our project won 2nd prize in a worldwide competition by Intel.
- = Entrepreneur training.

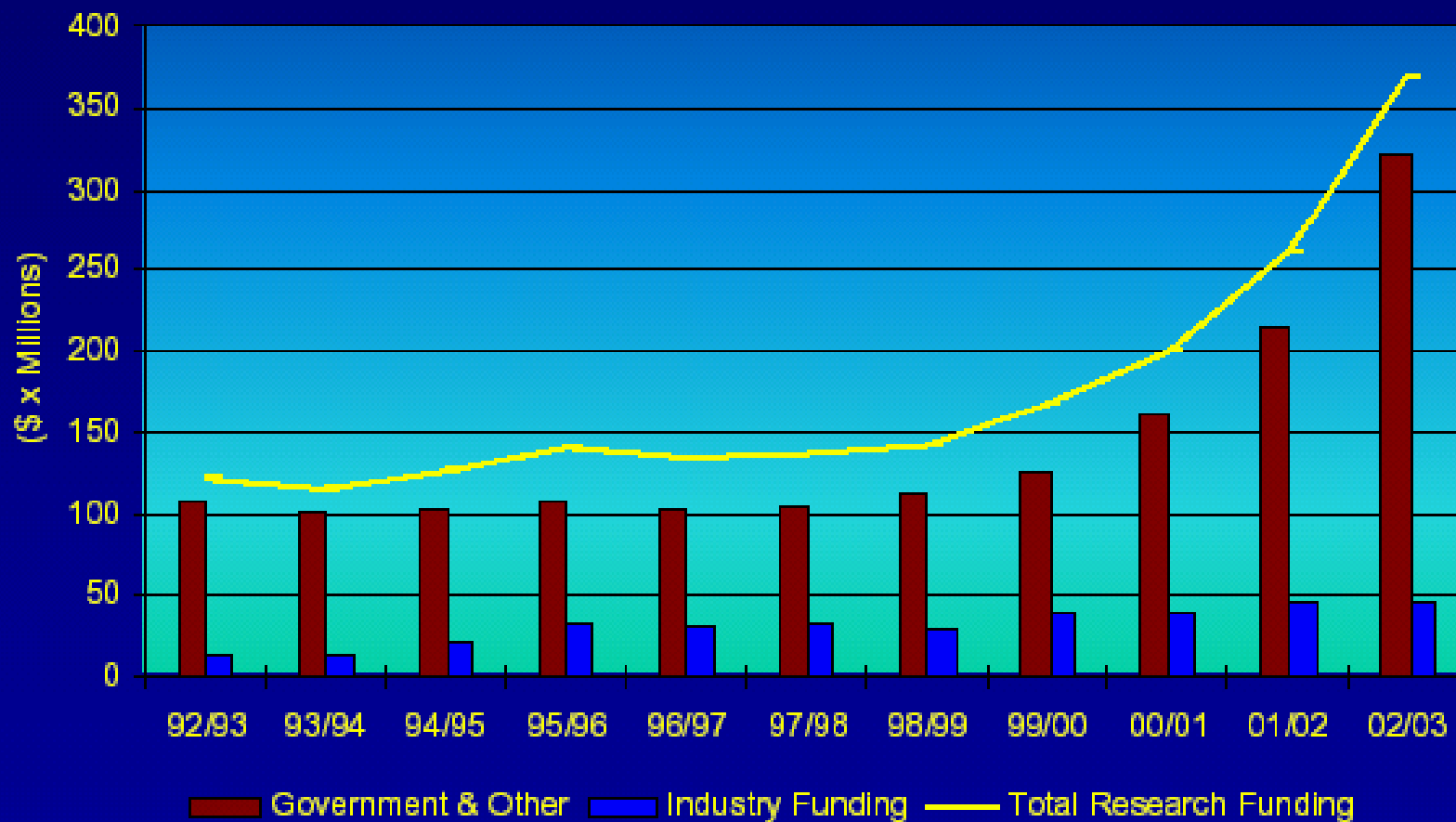


Recommendation

- University provides wonderful of opportunities beyond the classroom.
- Yeah, I know you think you are too busy already.
- Get involved in:
 - Student projects
 - Student politics
 - Something outside your core department
 - Any activity to broaden your perspective



UBC Research Funding

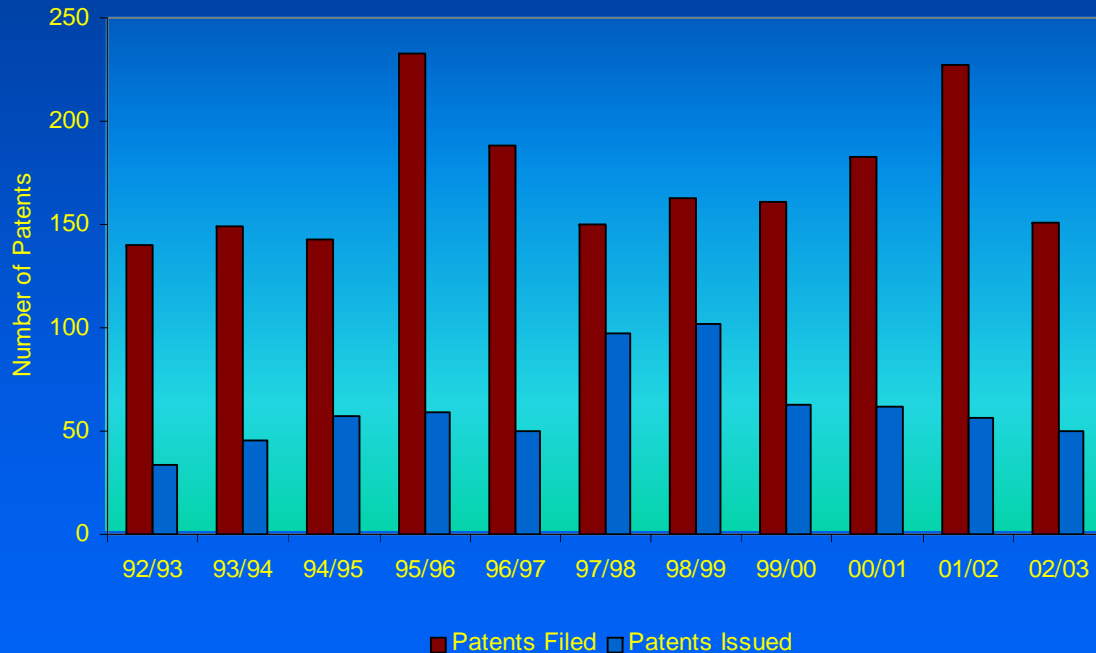


UBC Today - UILO

- Led by Angus Livingstone
- Past director of my company – BC Advantage Funds.
- Angus and UBC's UILO are very well respected – especially in the US.
- Credit to Angus for the next few slides.



Patents Filed and Issued



UBC Third in Canada in Number of U.S. Patents Granted 1997- 2002

1st) Nortel Networks	1736
2nd) Siemens	154
3rd) UBC	141
10th) McGill	92

Source: U.S. Patent & Trademark Office

Benchmarking UBC against NA Universities

Technology Transfer Performance

	UBC	Top in Canada	UBC Rank	Top in N.A.	UBC Rank
Total Research	\$129m	\$312m	4th	\$2.3b	69th
Invention Disclosures	135	137	2nd	957	26rd
U.S. Patents Filed	104	104	1st	852	26th
U.S. Patents Issued	29	29	1st	298	33rd
Licenses Executed	42	42	1st	262	24th
Spin-offs Companies	13	13	1st	29	3rd
Royalties	\$5.5m	\$10.6m	3rd	\$129m	36th

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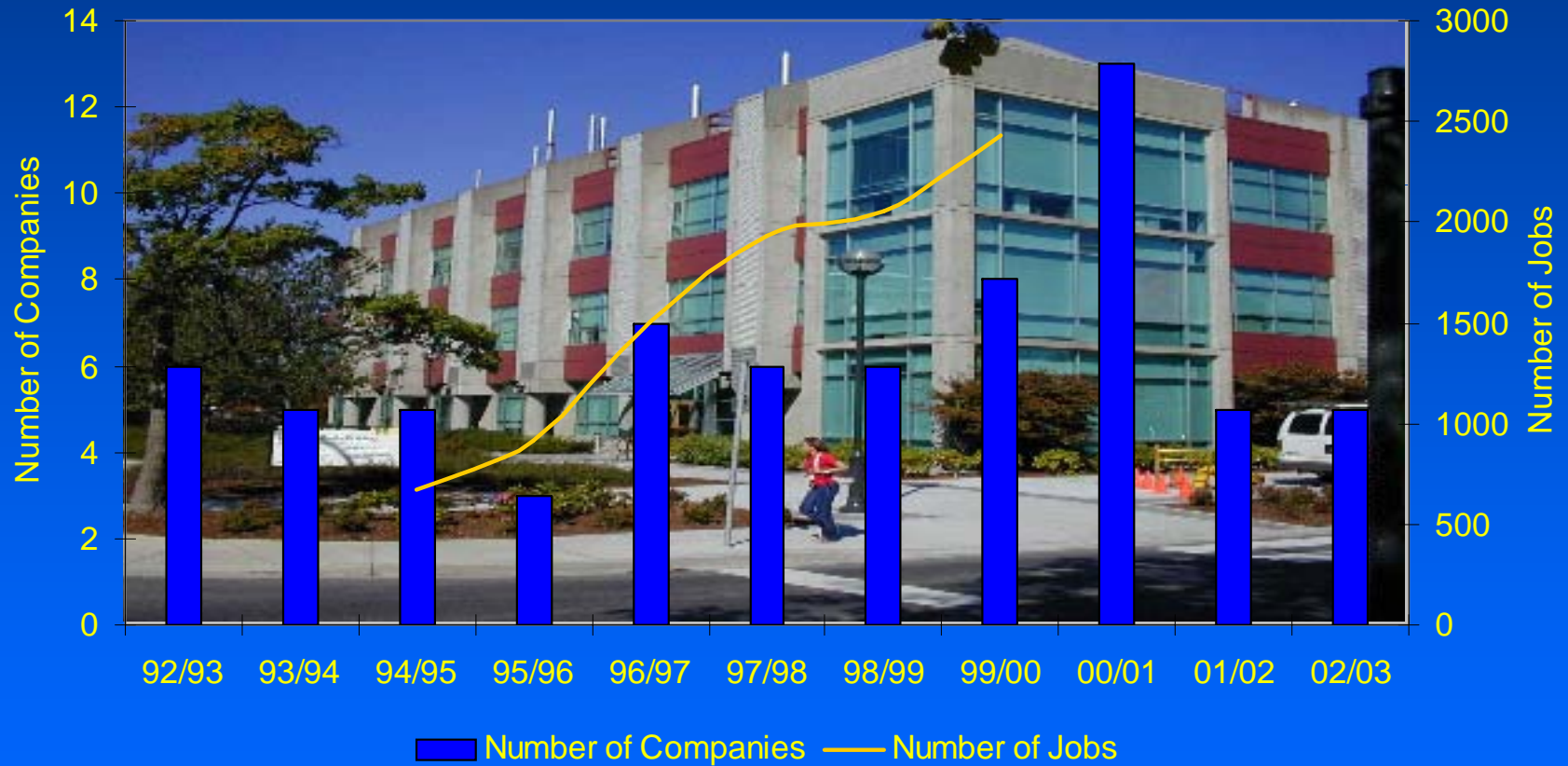
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Source: AUTM Licensing Survey FY 2001

Note: Financial figures in US\$



UBC Spin-off Companies





Wardlabs

vector¹²



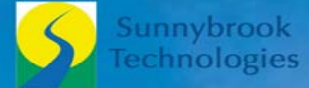
StrongWood



D-Wave Systems Inc.
THE QUANTUM COMPUTING COMPANY



 **The University of British Columbia
and Affiliated Hospitals
University - Industry Liaison Office** 



M.A.L.



MICROLOGIX BIOTECH INC.



Prescient NeuroPharma Inc.



KINETEK



Keep this picture in mind. I believe UBC's contribution is actually much more significant.

Westport
INNOVATIONS INC.

WebCT

Corona Vacuum Coaters Inc.

webnames.ca
securing internet identities



D-Wave Systems Inc.
THE QUANTUM COMPUTING COMPANY



**The University of British Columbia
and Affiliated Hospitals
University - Industry Liaison Office**



**Sunnybrook
Technologies**

M.A.L.

E-ONE MOLE ENERGY

ANGIOTECH
Pharmaceuticals, Inc.



MICROLOGIX BIOTECH INC.



**Forbes Medi-Tech
INC.**



**Biotherapeutics
PROTIVA**

**ID
BIOMEDICAL**

XENON



**NeuroMed
Technologies INC.**



KINETEK

NeuroVir
acquired by
MediGene



Prescient NeuroPharma Inc.



**Response
Biomedical Corp.**

INTEROMEX
Biopharmaceuticals Inc.

**Synapse
Technologies**
acquired by
**BIOMARIN
PHARMACEUTICALS**

**ACTIVE PASS
PHARMACEUTICALS**

**Radical Vision
Therapeutics Inc.**



**ARC
PHARMACEUTICALS INC.**

**PRECISION
BIOCHEMICALS INC.**

Biotechs in Vancouver ~ 60 % are UBC Spin Offs

Exceptional Science + Entrepreneurial Spirit
Plus Experienced UILO

Some Examples:

Julia Levy / David Dolphin

– QLT – Largest Canadian Biotech

Michael Hayden

(3) - Neurovir (*MediGene*); Xenon; Aspreva

Peter Cullis

(3) - TLC; INEX; Protiva

Bob Hancock

(2) - Micrologix; Inimex

Max Cynader

(2) - Neurovir (*MediGene*); Wavemakers

Wilf Jeffries

(2) - Synapse (*BioMarin*); GeneMax

Steve Pelech

(2) - Kinetek, Kinexus

Helen Burt

(2) - AngioTech, ARC

Martin Gleave

(1) - OncoGenex

Julian Davis

(1) - Terragen (*Cubist*)

John Schrader

(1) - Immgenix (*Abgenex*)



**Winner of the BC Biotechnology
2003 Lifetime Achievement Award**

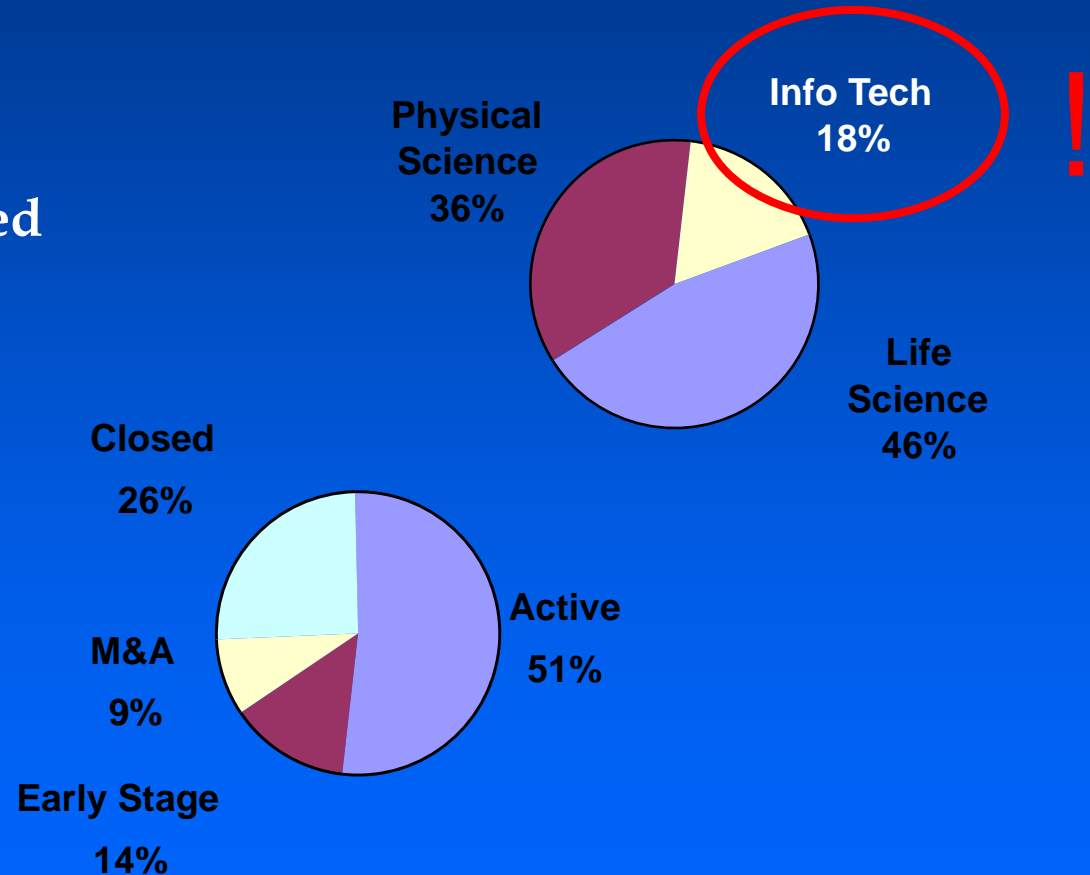




UBC Spin-off Companies

Summary Statistics

- 113 spin-off companies
- 92% of companies located in British Columbia
- 2,500 jobs created
- Investment
 - UBC - \$15m
 - Government - \$45m
 - Private - \$1.5b



So Why Am I Not a Happy Guy?

- I don't even understand this bugs and drugs stuff.
- I am a TECH guy
- So what's going on in E&E, Computers, Tech ?
- What follows are my ideas alone.
- And may not be officially sanctioned by UBC.
- Heck, even my good friend Angus might not like some of what I am about to tell you....

Case Study #1 – Professor

- John MacDonald was still a professor in here in Electrical Engineering when I started as a student.
- Started MDA with a friend who was an Engineer at the UBC computing center.
- (John) MacDonald & (Vern) Dettwiler
- TOP 16 B.C. TECH Cos BASED ON REVENUE (2003)
- 1 Creo inc.
2 MacDonald Dettwiler & Assoc (2500 employees)

Case Study #2 - Student

- I started Nexus Engineering with an E&E classmate, from the Electric Vehicle project.
- While we were both still grad students here at UBC.
- Grew to 7 companies, 350 employees in 6 countries.
- Second largest manufacturer of headends in the world.
- Sold to Scientific Atlanta in 1993 for \$\$\$.

My first experience

- Entrepreneurial experience.
- We were SO naïve.
- I now literally laugh at our original structure and financing agreements.
- Nevertheless, we grew to be #2 in the world.
- Single biggest reason: Our Mentors (please also keep this in mind.)

Recognized as Entrepreneurs

- At Nexus we won 9 awards for entrepreneurship

Including:

- Entrepreneur of the year
- Silver medal in Entrepreneurship from Canada Awards
- Business Leader of the year
- UBC and BCIT Alumni Awards

Business

THE VANCOUVER SUN, SATURDAY, NOV. 8, 1986 ★★★★★

Nexus named top company



Nexus Engineering Corp. has been named B.C. business of the year by the B.C. Chamber of Commerce.

The Burnaby-based satellite, broadcast and cable television equipment maker received the award Friday at a Vancouver dinner.

It is the first year the chamber has made the awards, according to chamber chief executive Bill Goldie.

The awards for the best business achievements are a major thrust by the B.C. Chamber of Commerce to salute and enhance the image of the B.C. business community," said Goldie. "It highlights a select group of private companies which have shown outstanding achievements during the current year."

Nexus Engineering was the idea of a couple of University of B.C. electrical engineering graduates: Basil Peters, who is chairman and chief executive, and Peter van der Gracht, president.

In an interview Friday, Peters said Nexus Engineering will have sales revenues of between \$11 million and \$12 million this year. About two-thirds of the sales will be generated in export markets.

"We are absolutely thrilled about the award," said Peters. "It means a lot to us. We see Nexus as an example to other companies here."

Nexus Engineering got its start in 1982 when Peters, van der Gracht, Tom Holgate and Marc Phillips founded the company. Two years later, additional capital came from Discovery Enterprise Fund and Ventures West.

The company currently employs 135, according to Peters.

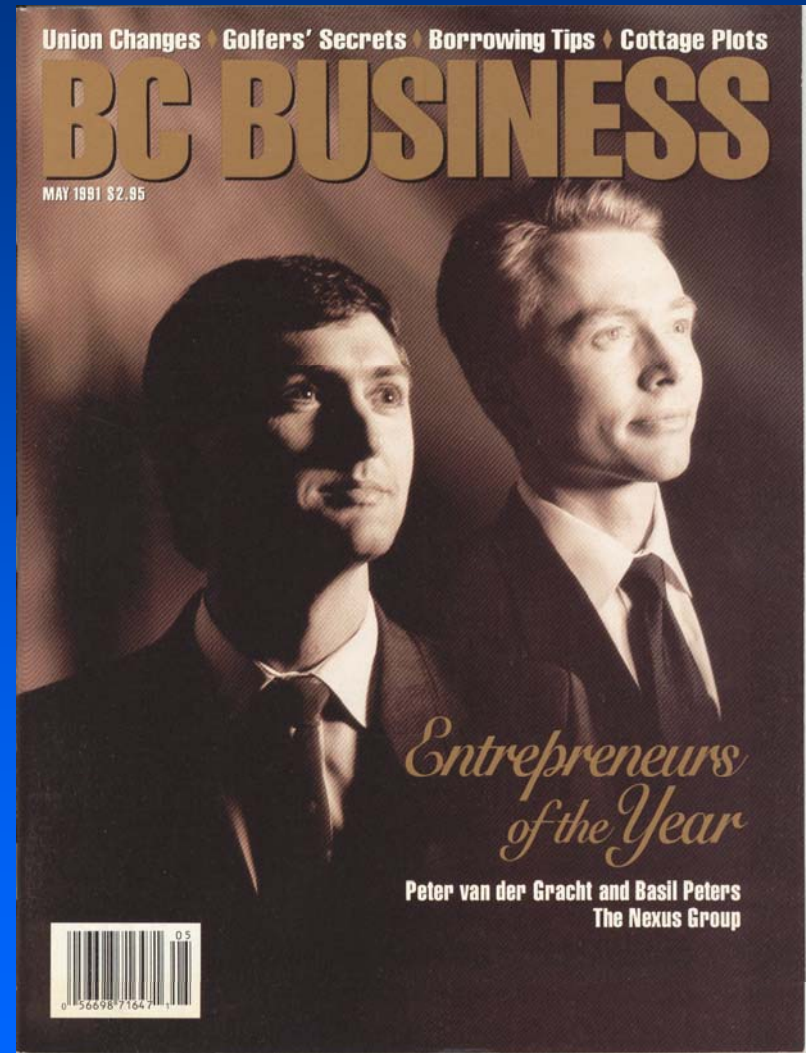
Other winners Friday were:

- Lamford Forest Products Ltd., New Westminster, in the category of business expansion and job creation.
- Western International Communications Ltd. (IXNW), New Westminster — community involvement.
- ASA Foods Ltd., Vancouver — agribusiness.
- Flag Shop, Vancouver — services.
- Landucci Lumber Ltd., Surrey — manufacturing.
- Solarsystems Industries Ltd., Richmond — exports.
- Lamford Forest Products Ltd., New Westminster — primary production.
- Agri Forest Technologies Ltd., Kelowna — new B.C. product.
- MacMillan Bloedel Ltd., Powell River division — quality of life and physical environment.
- Chai-Na-Ta Ginseng Products Ltd., Surrey and Lytton — new venture.

AN EXAMPLE for other companies is Nexus chairman Peters' hope for the company and the Chamber of Commerce award. Two-thirds of the company's revenues will be generated abroad.

JEROLD GREEN

Generating lots of media attention

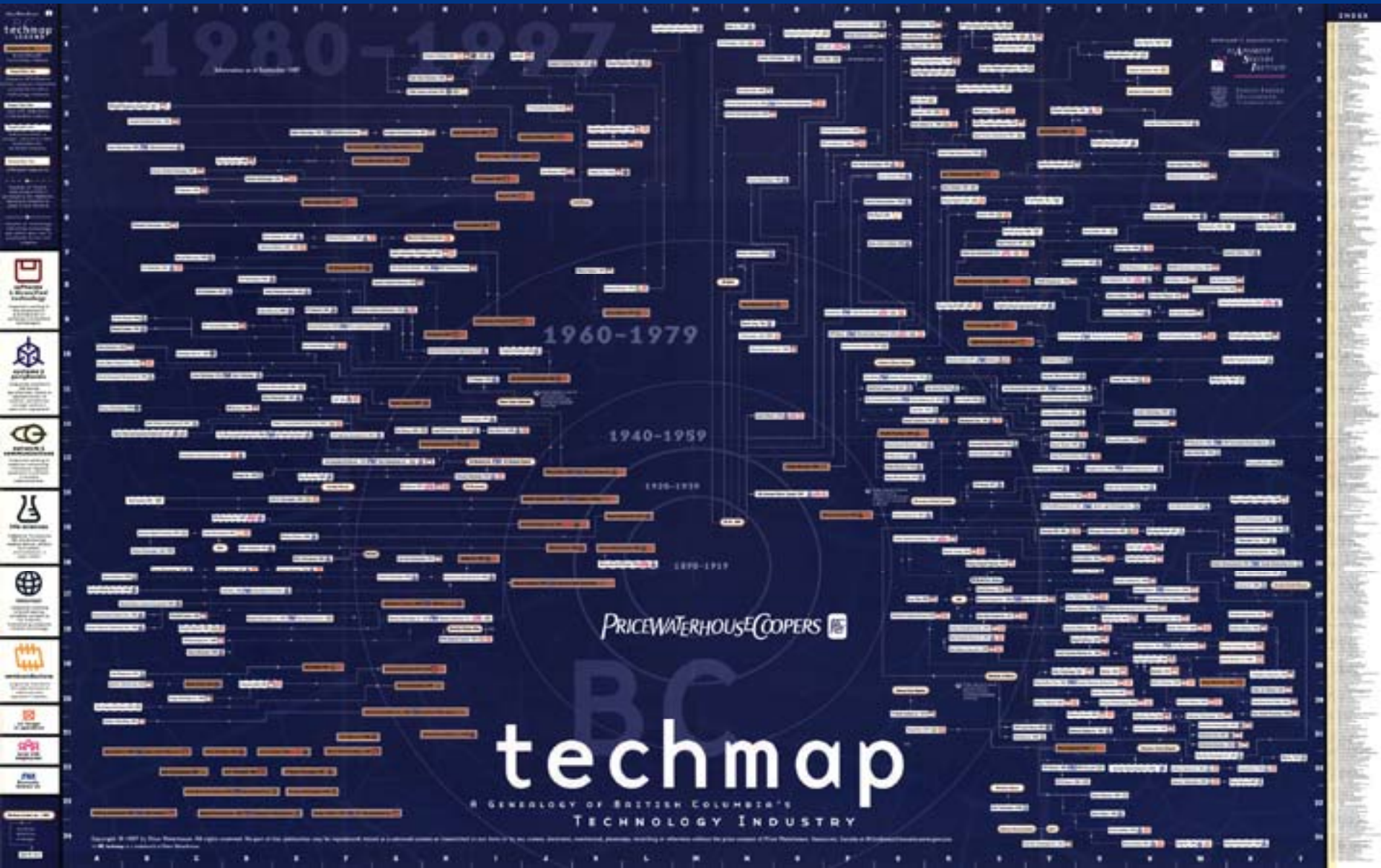


Which generated several unsolicited proposals of marriage

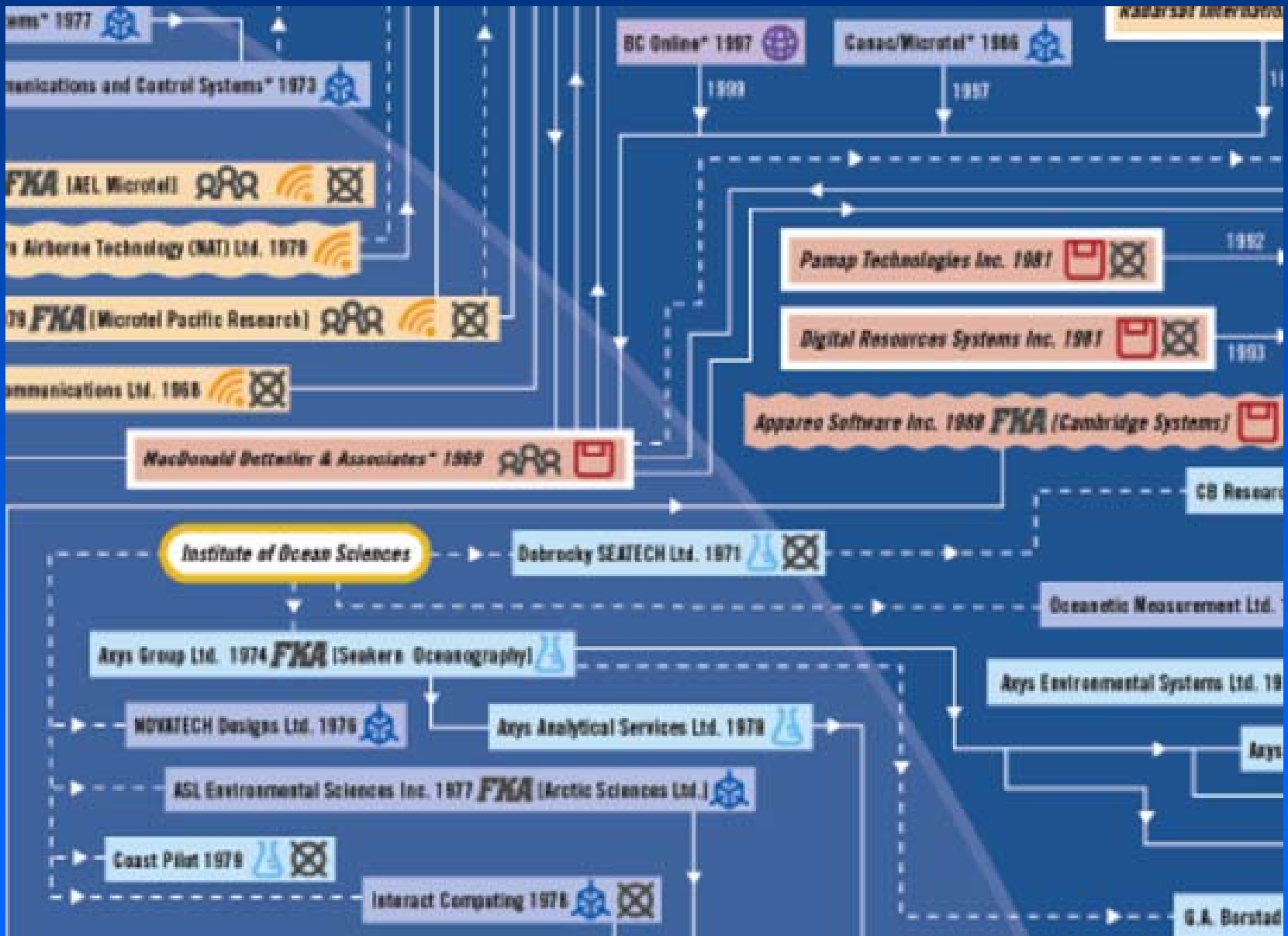
What John MacDonald Taught Me

- When I was a young entrepreneur,
- John MacDonald, then still CEO of MDA,
- Told me how proud he was of the MDA Spin Out companies.
- I thought he was out of his mind.
- Because I was scrambling every day to hire more engineers and new grads.
- But now see that he was right.

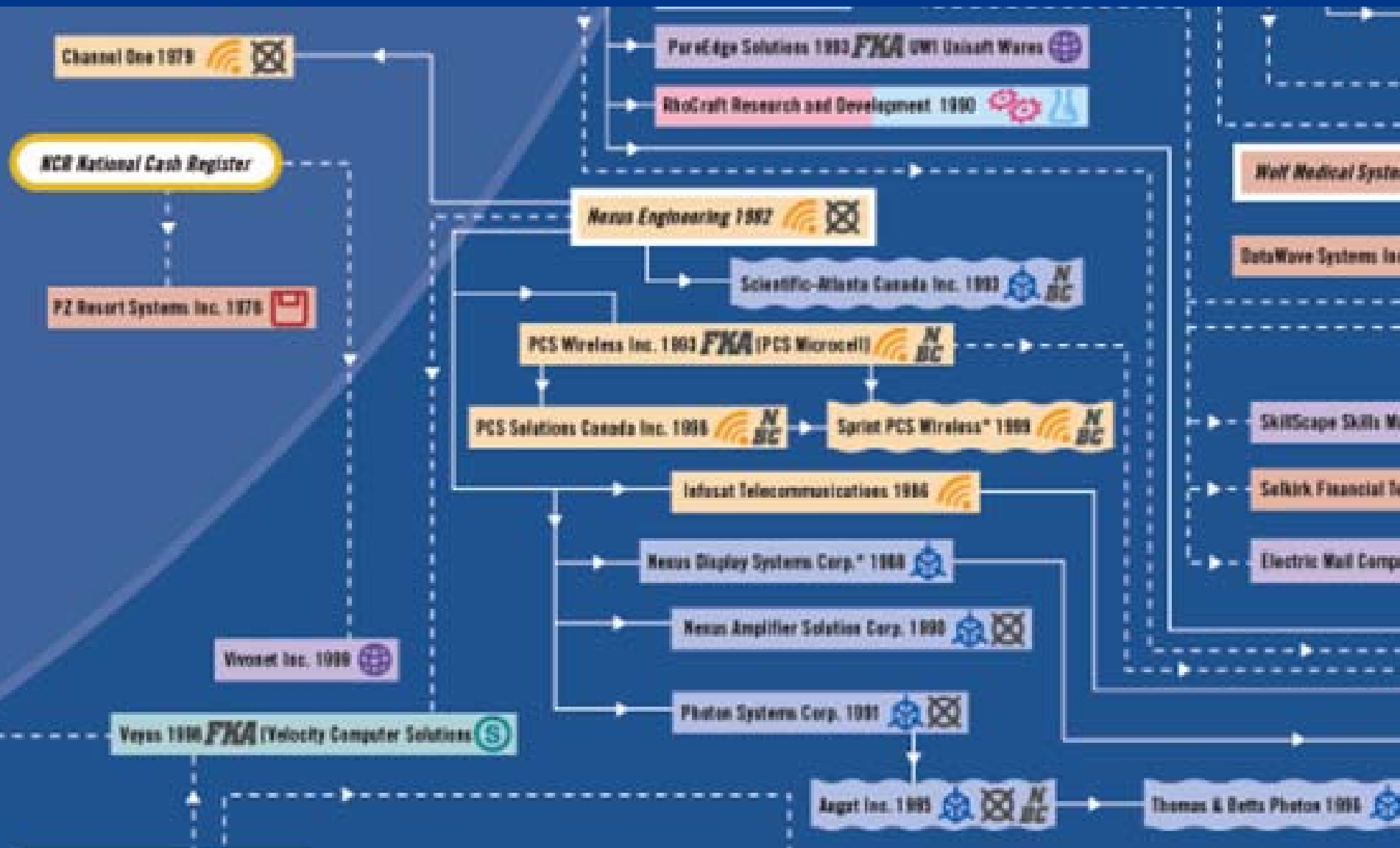
BC Tech Map 1997



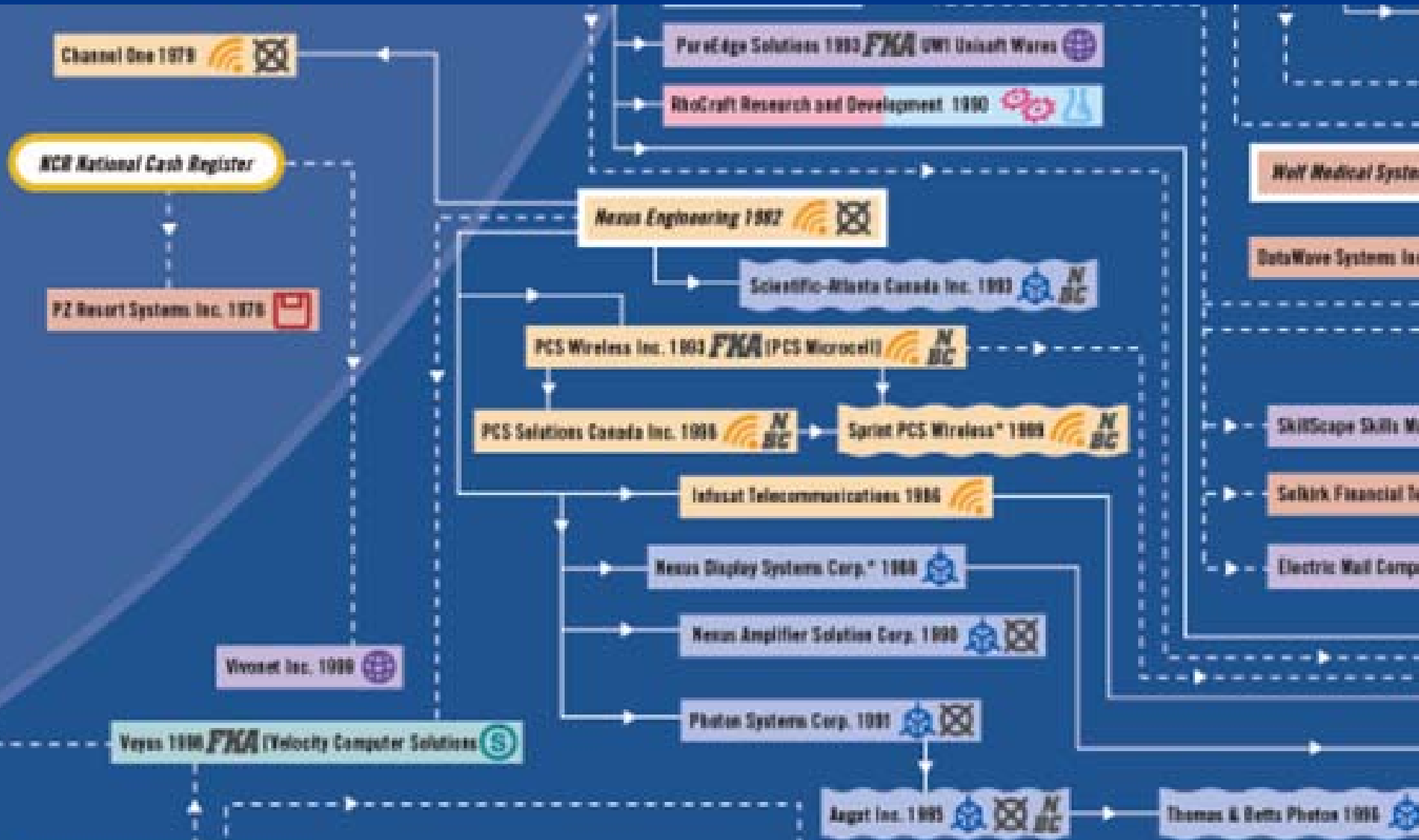
BC Tech Map 2003 - MDA



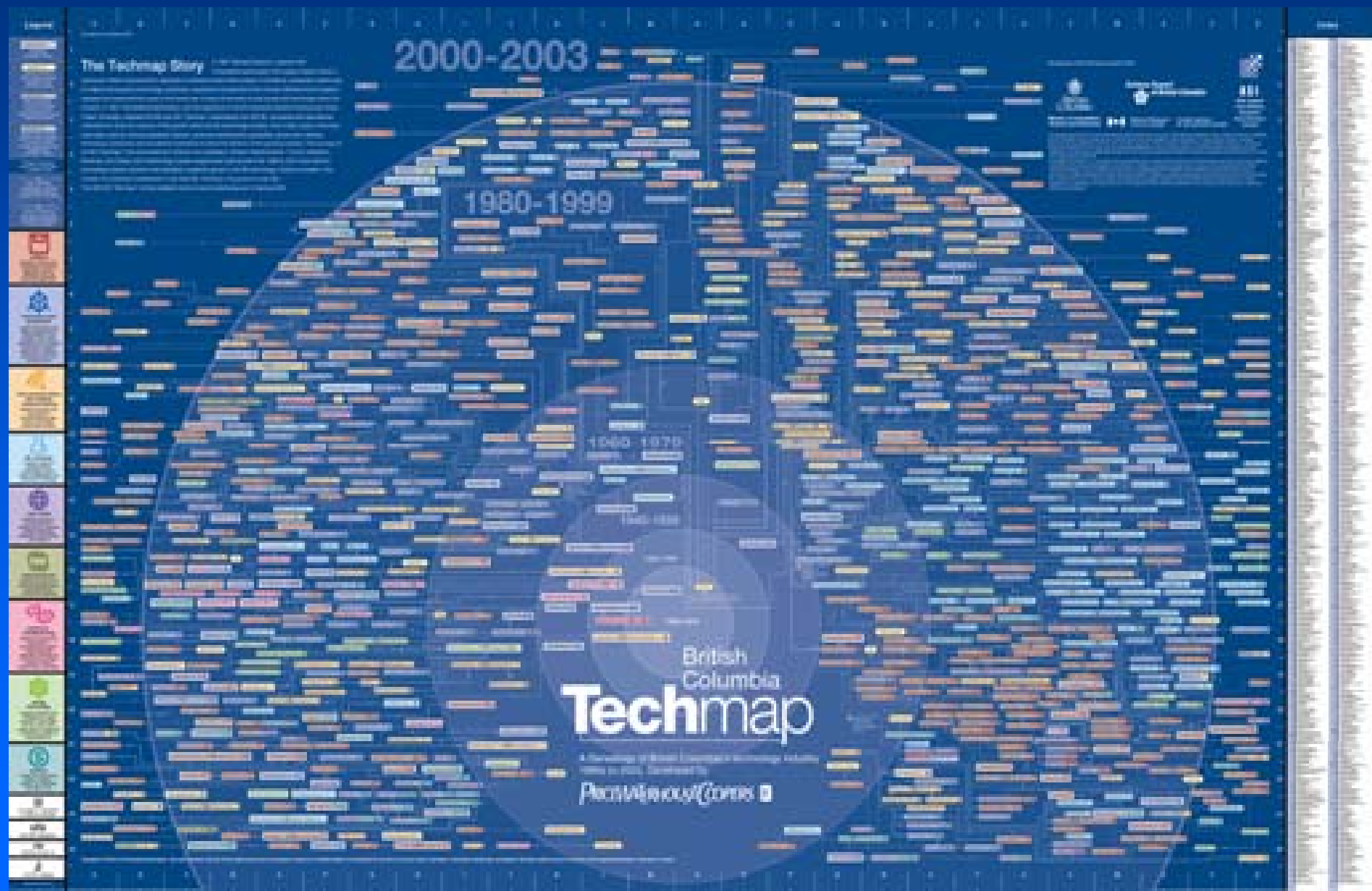
BC Tech Map 2003 – Nexus



Nexus is also a 'UBC Spin Out'



Many of these started at UBC



Is it better in the Valley?

- I grew up in Vancouver.
- I am a techie so always thought it was bigger and brighter in Silicon Valley.
- For 2.5 years the mid-1990's I was the CEO of a mid sized tech company right in Silicon Valley.
- Conclusion: its bigger but not better.
- We even have some advantages – i.e. currency.
- Biggest thing holding us back is our self confidence.

My Day Job Now

- In late 2002, I co-founded BC Advantage Funds.
- Now 3 funds with \$30 million.
- Core part of our mission is to invest in university spin outs.
- And make professors and students a ridiculously large amount of money,
- along with our shareholders.
- And have fun and put something back.

Making University Millionaires

- BC Advantage Funds' first investment – UVIC spin out – Protox.
- Made Professor Tom Buckley a millionaire (public info).
- My most recent investment – Sensific – UVIC.
- Professor Tom Fyles head of Chemistry at UVIC.
- I have also invested in Brightside - started by Professor Lorne Whitehead, UBC VP Academic.
- Also the founder of TIR and two other UBC spin outs.

My Goal

- I hope that some of you start companies.
- Sooner rather than later.
- With others from UBC.
- I encourage you to work with the UILO.
- Don't let anything get in your way.
- Build a team.
- Find some mentors.
- Make a ridiculous amount of money.

When should you start?

- Try hard not get a 'real' job first!
- Do it early in life.
- Being a student is excellent training:
 - used to working long hours
 - for no money (i.e. already used to starvation)
 - not yet risk adverse (because you have no money)
 - willing to roll the dice double or nothing every day (because you are too young to know any better)

OK, but what about you?

- The real question is whether it's right for you.
- Should you even try?
- Shouldn't everyone try?
- No, it can easily ruin your life.
- How much is genetic and what can be learned?

Some discriminating tests

- Hot stove test.
- Is the glass half full?
- See around the mountain.
- Perseverance.
- Work with teams.

Characteristics of Entrepreneurs

- Lots written by VCs
- You may not like some of it.
- Sample characteristics:
 - first born
 - entrepreneurial family
 - incredibly persistent
 - intuitive
 - OCD
 - weird relationship with father

Entrepreneurial Teams

- An individual can't be perfect.
- But a team can come close.
- There are exceptions (like Jim Pattison and Ted Rogers).
- Investors only back teams.

Entrepreneurship is not taught

- It's learned.
- Universities are starting to try.
- But today, its still more of an apprentice program.
- Often entrepreneurs come from entrepreneurial families.
- I want to expand that subset.
- My belief: “All successful entrepreneurs have good mentors.”

Mentors

- The most important controllable factor in your success.
- Ideal team includes some grey hair and some serious entrepreneurial scar tissue.
- Good ones not easy to find or to get sucked in.

Why they might make you rich

- How it worked for us at Nexus.
- What it feels like after you make your first \$million.
- What's still fun?
 - vicarious business thrills
 - management - NOT
- Passages and symbiotic relationships.
- Could always use a few more \$million and what else would you do anyway?

Mentors – The difference between success and failure

- A good Mentor's most important contribution is:
- To prevent the entrepreneurs from blowing up the company.
- Seriously.
- In my first company, our angel investors / mentors / directors literally prevented that a dozen times.
- In my own investments, have done the same several dozen times.

How can they do that?

- It's experience.
- For example, many companies fail because they run out of money.
- That almost never happens to experienced entrepreneurs.
- Even a founder with an IQ of 160 can't learn enough, fast enough, to have the experience.
- Every successful company I have seen has mentors / good directors.

The Business Plan

- Very simply – an intelligence test.
- The format must be perfect.
- If you have a web browser, there is no excuse.
- The financials are the hardest part.
- Except possibly for the bios.
- If you've only done a couple of dozen, get coaching!

The Topic Doesn't Matter Much

- Many very successful companies don't execute their original business plan.
- Pivotal – started as a pen based software company, but ended up as a CRM company.
- Creo – started building high capacity tape storage, but ended up making printing plates.
- ALI – started up doing breast mammograms and ended up in medical imaging storage.
- Get the right people on the bus (Read: “Good to Great.”)

Getting an Investor's Attention

- What it looks like from my perspective.
- Dozens of business plans per week.
- You need an introduction.
- Ideally from someone who has written a cheque.
- And has credibility with me.
- Ideally one of our fund's mentors.
- Sorry it's not easier.

What is MOST important?

- OK, you have a bunch of entrepreneurs...
- What is most important in determining whether you will make really BIG \$ in your first entrepreneurial venture?
 - management?
 - innovation?
 - hard work?
 - luck?

LUCK!

- Was a bit of a trick question.
- Zero doubt that this is the correct answer.
- Various proofs available:
 - Bill Gates: \$ vs IQ standard deviation
 - millions of individual examples

Right Place at the Right Time

- Have to get two things right.
- Its hard.
- It's mostly luck when you are young.
- Just can't accumulate the knowledge to consciously position yourself.
- That's what old guys always say.... (the stove)

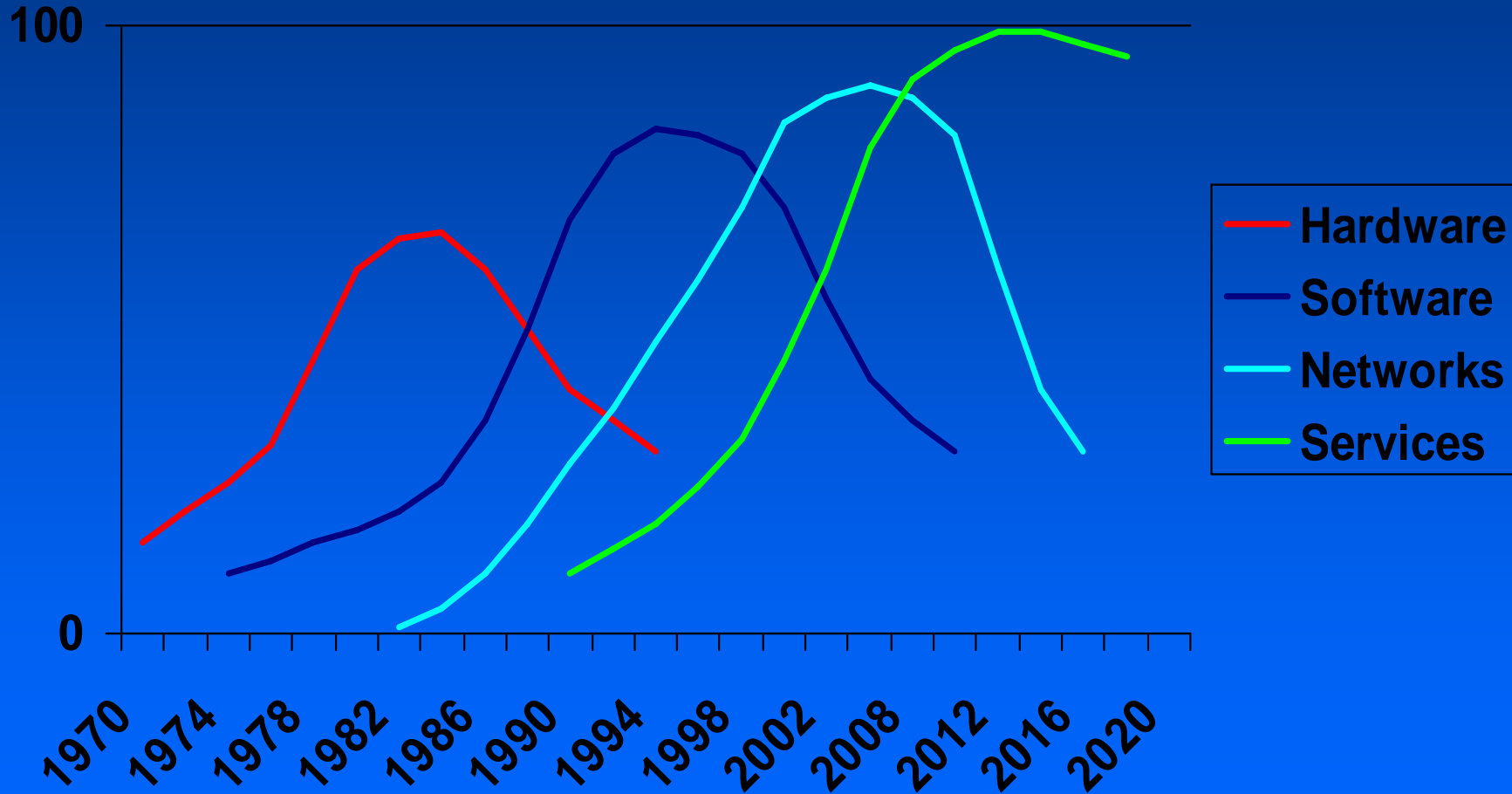
How I blew it the first time

- Prototypical techie nerd in the basement.
- Just had to build stuff.
- Vision of production line.
- Genetic defect common to engineers.
- Never listen anyway.
- I guess I just had to learn the hard way.

Getting it right the next time

- Being in the right place at the right time can be learned. (Terry Mathews more than Mike Copeland.)
- The right timing is much harder.
- The “Year of the LAN” for over 5 years.
- You can see into the future -- if you think about it hard enough.
- Its actually pretty easy -- just takes a really long time to learn how.

Eras of Opportunity



What else is important?

- How else can you improve your chances of making really big \$?
- Second most important lesson:
- Try not to 'blow your brains out'.

200 Fatal Mistakes

- Probably about 200 common mistakes that entrepreneurs make in the first few years.
- Unfortunately, most are fatal.
- Most companies try to make a dozen or so.
- They are not in a book or CD.
- That's another reason why chances of great success are so small.

Some good news

- The mistakes can be learned.
- The hard way (common path for entrepreneurs -
remember the stove.)
- Go broke a few times (Jimmy and Ted almost did
a couple of times.)
- There is a much better and faster way.

Other important lessons

- Do not run out of money.
- All investment capital comes with costs and conditions that are worse than you can possibly imagine (and that you probably won't understand until its too late).
- You have to sell what you make.
- 197 other lessons for another day.....

Good

Luck!