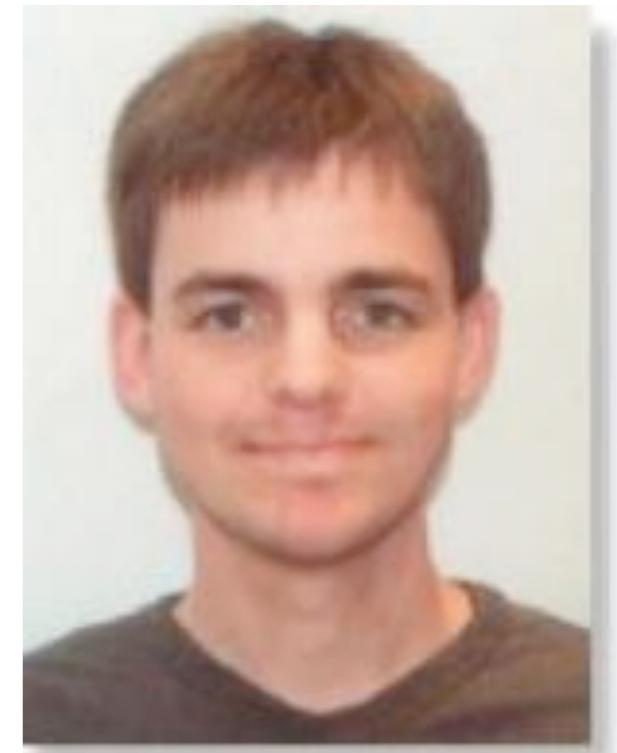
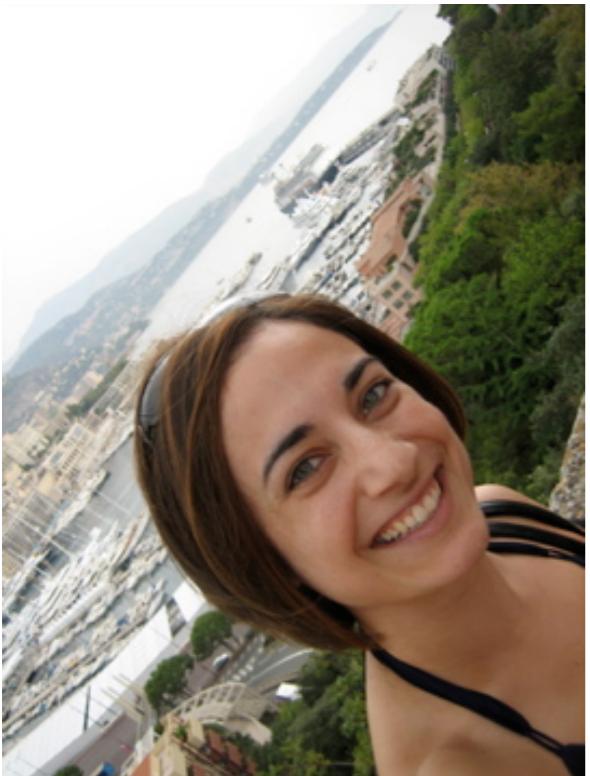


# Computer Science

## The Digital Future

# Our Panel

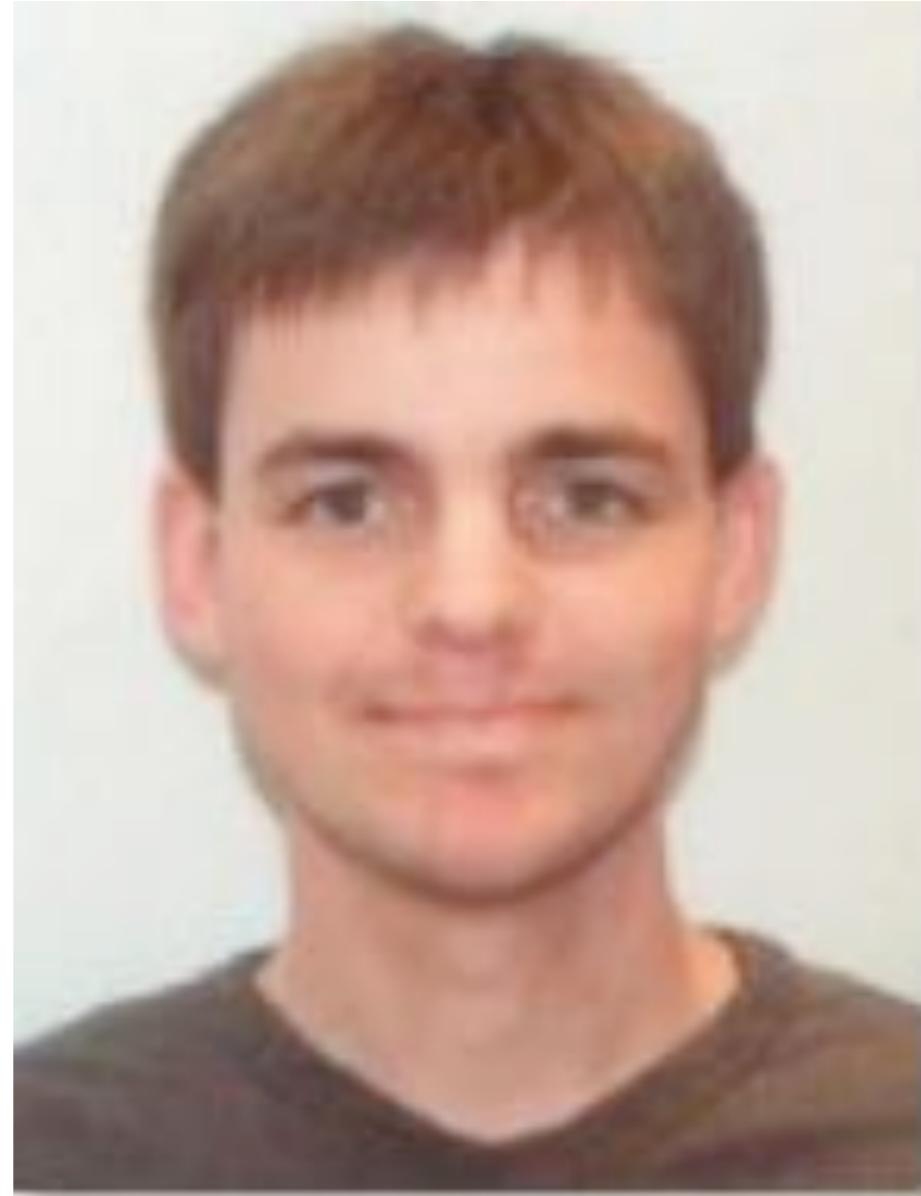


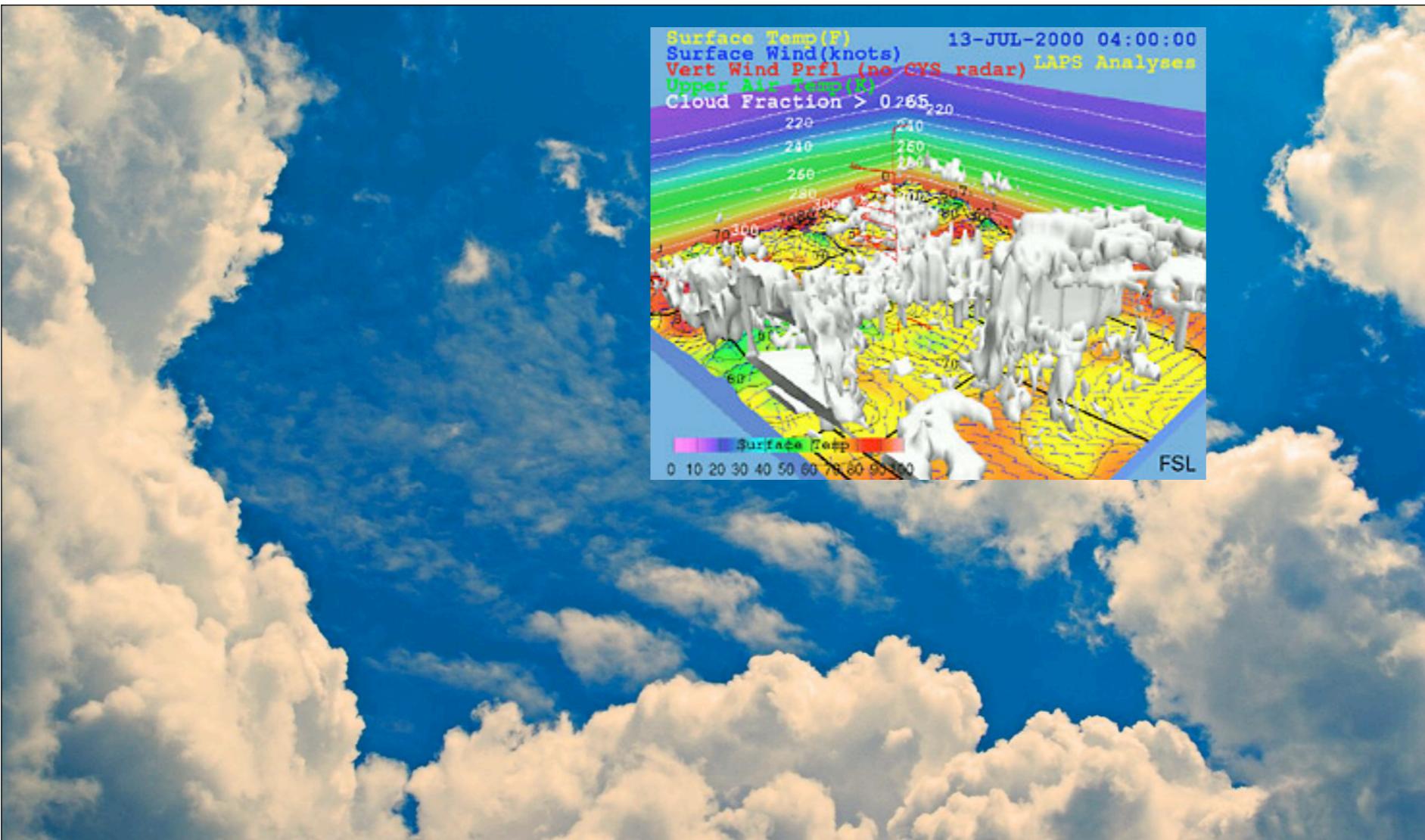
# Our Talk

- Technology day to day
- Computer Science at University
  - Robots(everywhere)
  - How we work
- Bringing ideas to your living room

# Michael Wirth

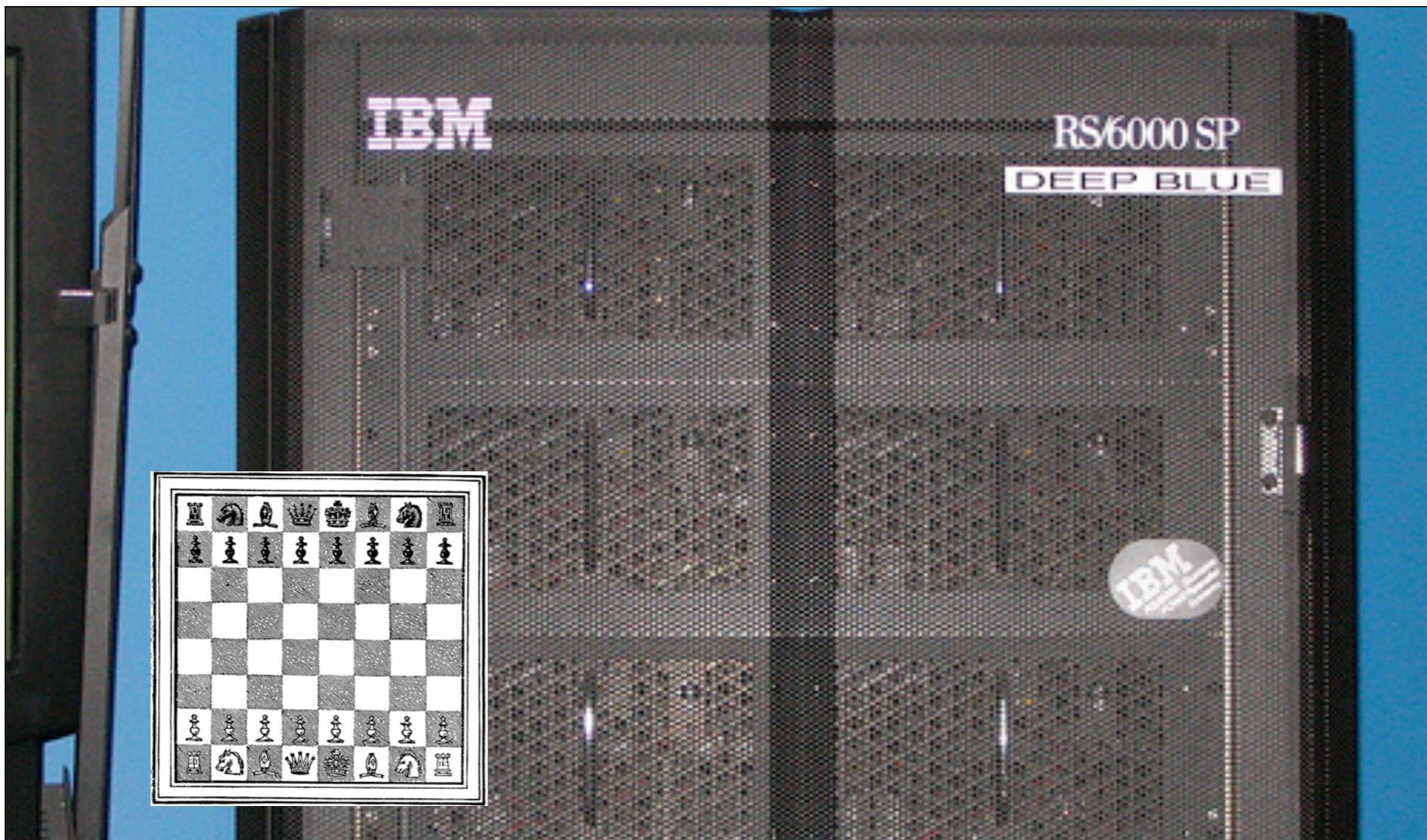
Professor • Image Processing





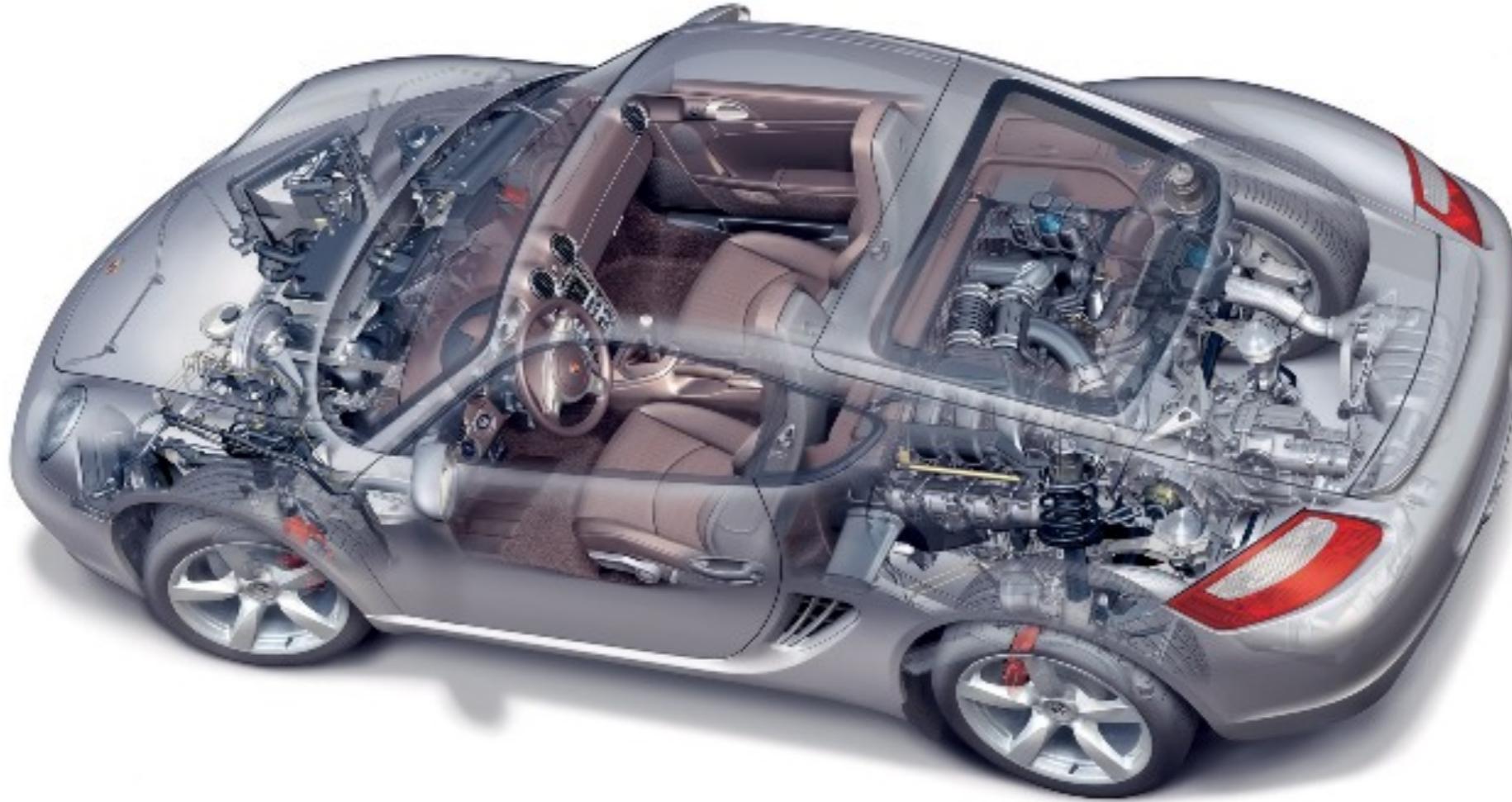
Babylonians looked at cloud patterns to predict weather

Now we use computers which do 768 billion calculations per second!



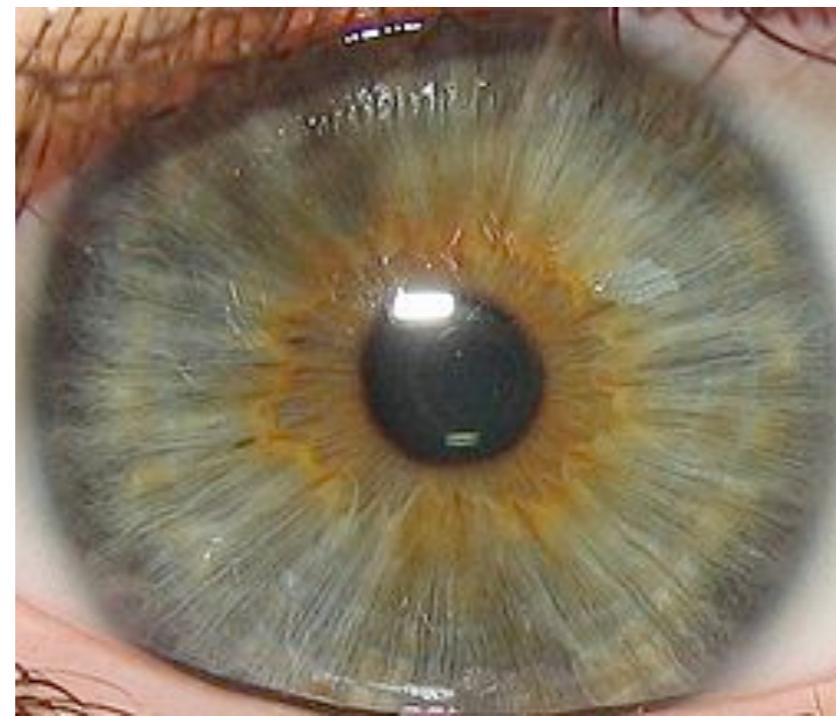
In 1997 IBMs Deeper Blue  
beat Garry Kasparov

Kasparov: 3 moves per second.  
Deeper Blue: 200 million.



Cars have 100s of “micro” computers to control engines and air bags.

35 million lines long.  
= 1038 copies of Harry Potter  
and the Deathly Hallows



Biometric recognition for security

Things that make us unique:  
fingerprints, face, hand, iris,  
DNA, veins



Quality inspection of pizzas

Is the pepperoni properly distributed? Enough cheese?



Automated transport

Vancouver skytrain.  
Fully automated, driverless  
trains.



Forest fire detection

Automated cameras detect  
forest fires in remote places.



**MASSIVE:**  
Multiple Agent Simulation  
System in Virtual Environment

Mummy 3  
Artificial Life.



## Interactive entertainment

Wii, Xbox 360, Playstation 3  
2008 \$21.3 billion industry  
19% increase over 2007



Everyday applications

Automated number plate  
recognition on the 407



## User interfaces

Designing how humans interact  
with information.  
-007 Quantum of Solace



Exploring planets

Mars Phoenix lander touches  
down on Mars.



Being green

Calculating carbon footprints,  
running power plants, simulating  
climate change



The future?

Financial cards with interfaces  
and fingerprint recognition?



## Robots

Industrial robots, telerobots,  
unmanned aerial vehicles

We all use software to  
solve problems everyday.

# Melanie Veltman

Masters Student • Robot Vision



# Vacuums



[http://store.irobot.com/product/index.jsp?productId=2475131&cp=2804605&ab=CMS\\_StoreHome\\_Gifts\\_DirtDog\\_102308](http://store.irobot.com/product/index.jsp?productId=2475131&cp=2804605&ab=CMS_StoreHome_Gifts_DirtDog_102308)

[http://store.irobot.com/product/index.jsp?productId=2580729&cp=2804605&ab=CMS\\_StoreHome\\_Gifts\\_Roomba410\\_102308](http://store.irobot.com/product/index.jsp?productId=2580729&cp=2804605&ab=CMS_StoreHome_Gifts_Roomba410_102308)

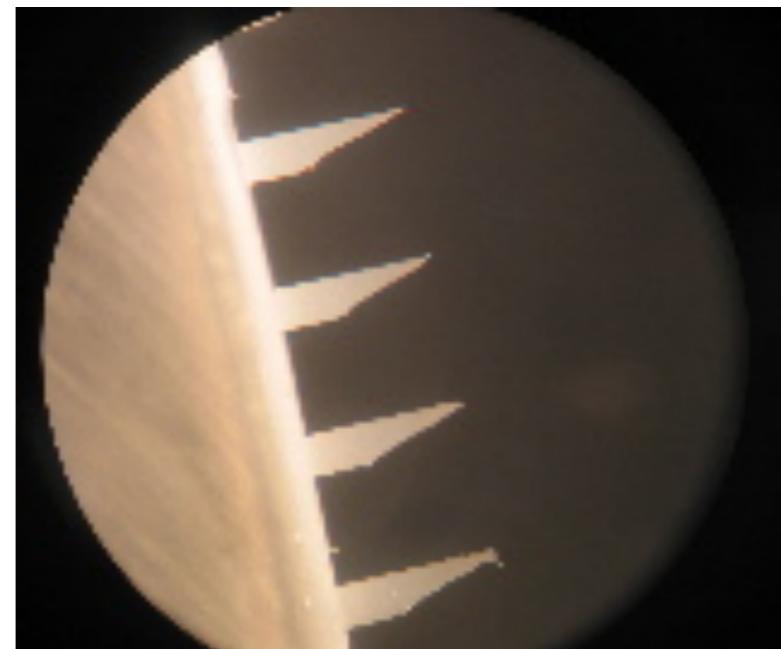
# Warrior



<http://bdml.stanford.edu/twiki/bin/view/Main/StickyBot>

# Stickybot

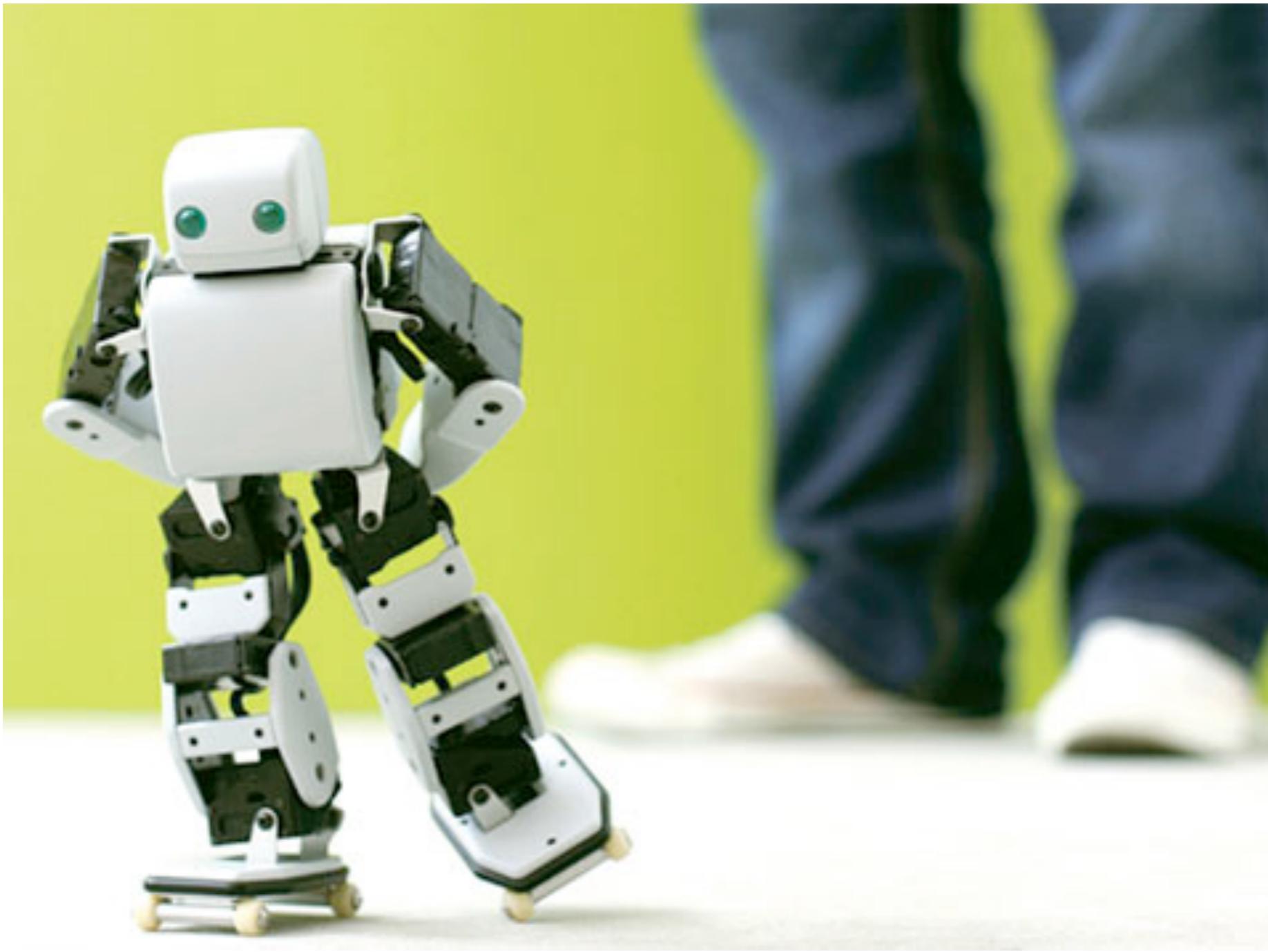
## A Wall Climbing Robot



<http://www.irobot.com/sp.cfm?pageid=150>

# PLEN

## A Humanoid Robot



[http://allezoup.files.wordpress.com/2008/03/plen\\_robot\\_skating.jpg](http://allezoup.files.wordpress.com/2008/03/plen_robot_skating.jpg)

# Nao

## Playing Soccer at RoboCup



[flickr.com/photos/northern\\_bites/2739708344/](https://flickr.com/photos/northern_bites/2739708344/)

# Autonomous Mobile Robots

- Perception
- Cognition
- Action

# Honda Asimo



[http://blogs.thecarconnection.com/blogs/marty\\_blog/wp-content/uploads/2008/05/asimo\\_conducts\\_dso-sm.jpg](http://blogs.thecarconnection.com/blogs/marty_blog/wp-content/uploads/2008/05/asimo_conducts_dso-sm.jpg)

# Asimo

## Conducting the Detroit Symphony Orchestra



<http://world.honda.com/news/2007/c071211Enabling-Multiple-ASIMO-to-Work/photo/pages/02.html>

# Julia Baldwin

Masters Student • Human Computer Interaction



# Interruptions

Snapshots

© Original Artist

Reproduction rights obtainable from

[www.CartoonStock.com](http://www.CartoonStock.com)



"Like to read, huh? Me, too. I'm a big reader.  
I just finished a book by Brown. You know  
Dan Brown? Great writer..."

# Productivity



[http://a.abcnews.com/images/Business/is\\_email2\\_071005\\_mn.jpg](http://a.abcnews.com/images/Business/is_email2_071005_mn.jpg)

# Clippy

It looks like you're writing a letter.

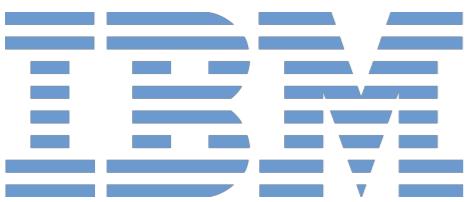
Would you like help?

- Get help with writing the letter
- Just type the letter without help
- Don't show me this tip again



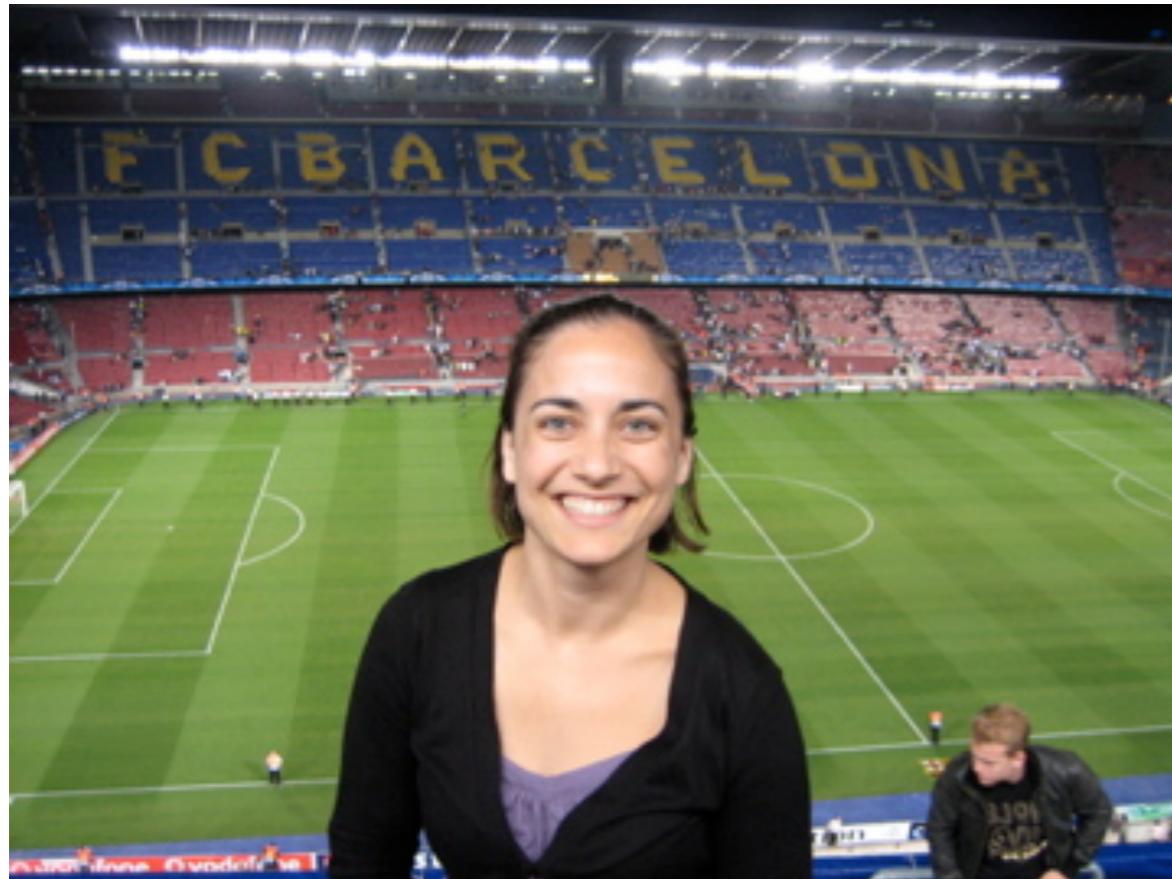


<http://www.concurringopinions.com/archives/images/clippy.jpg>



# Deirdre Athaide • Jennifer Schachter

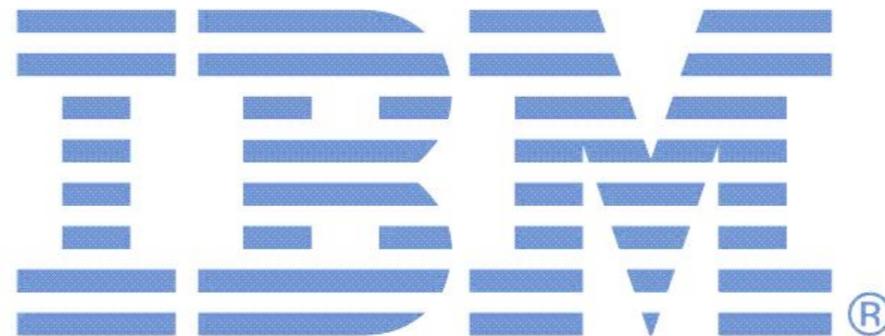
IBM • Sensor and Actuator Solutions Manager • WebSphere Commerce Development



# Industry!



**Microsoft**<sup>®</sup>

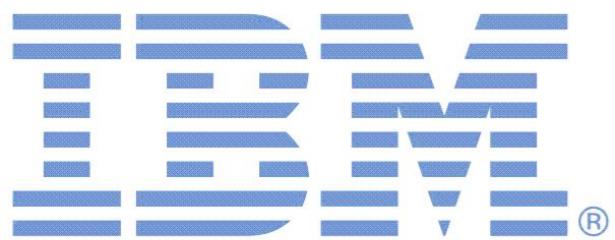


**BlackBerry**<sup>®</sup>

**Google**<sup>™</sup>

**YAHOO!**<sup>®</sup>

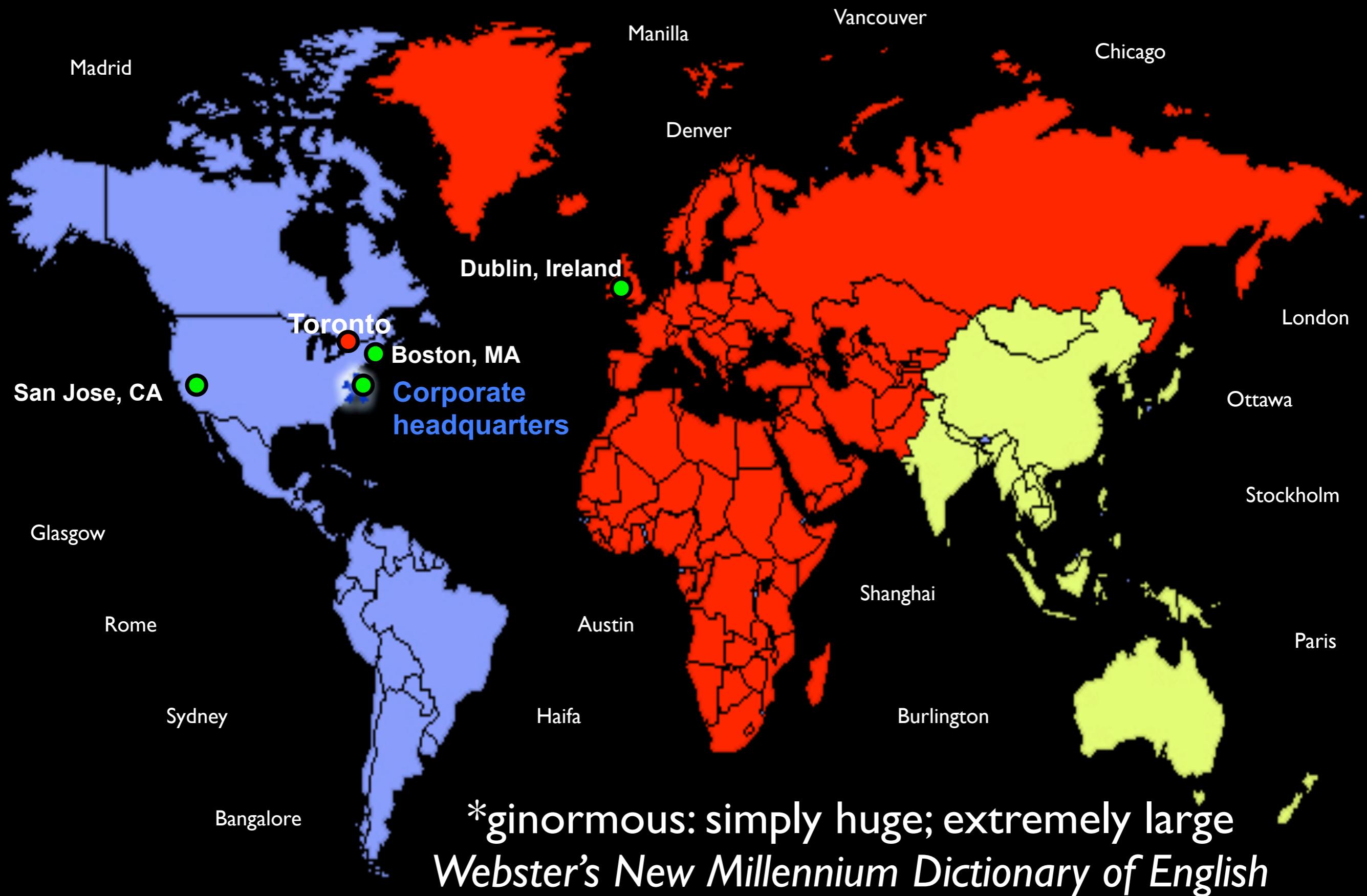
**facebook**<sup>®</sup>



# Toronto Software Lab



# IBM is \*ginormous\*...386,558 IBMers Worldwide!



# Who shops online?

The North Face website screenshot showing the Women's Jackets & Vests section.

Header navigation: Sign In | My Account | Wish List | Events Calendar | Find a Store | Subscribe | Search | GO

Main menu: MEN'S → WOMEN'S KIDS' FOOTWEAR EQUIPMENT | SPORTS TEAM RD&D EXPLORE | CART: 0 Items CHECKOUT

## WOMEN'S » JACKETS & VESTS

**WOMEN'S**

- Jackets & Vests
- Shirts & Sweaters
- Pants & Shorts
- Baselayers
- Accessories
- Footwear
- Series & Collections

**NARROW ITEMS BY**

[Clear All](#)

**Category** [All Categories](#)

- Waterproof
- Snowsports

155 RESULTS | PREV 1 .. 4 5 6 .. 18 NEXT | VIEW BY 9 | VIEW BY 36 | Sort By Price Low to High

W REDPOINT HYBRID JACKET

Color options: black, grey, blue

W REVERSIBLE CHAMELEON JACKET

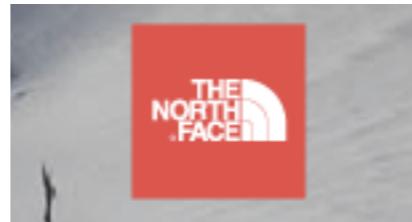
Color options: black, white, green, blue

W FOIL THERMAL JACKET

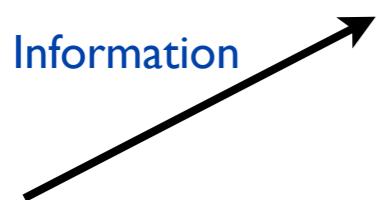
Color options: white, black

# Building an online store

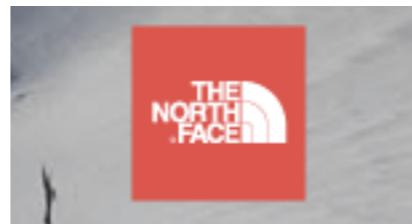
We want to  
sell our  
coats online



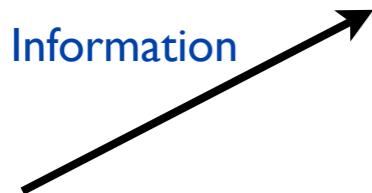
# Building an online store



We want to  
sell our  
coats online



# Building an online store

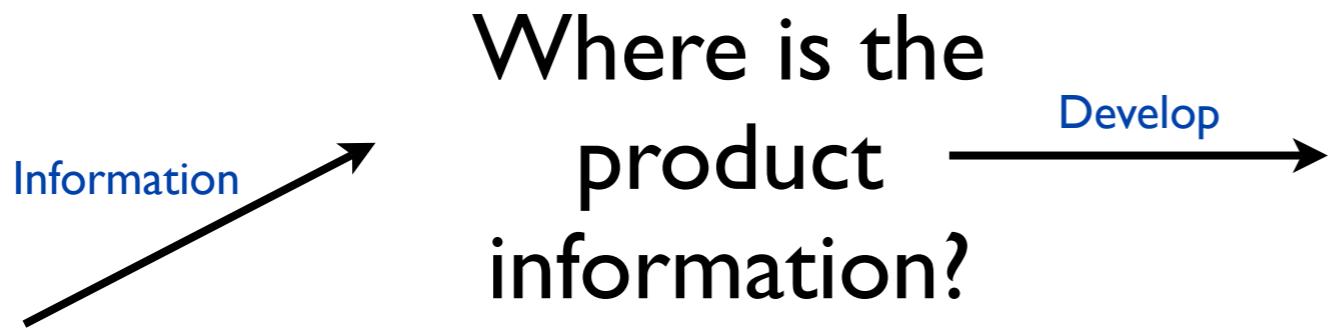


Where is the  
product  
information?

We want to  
sell our  
coats online



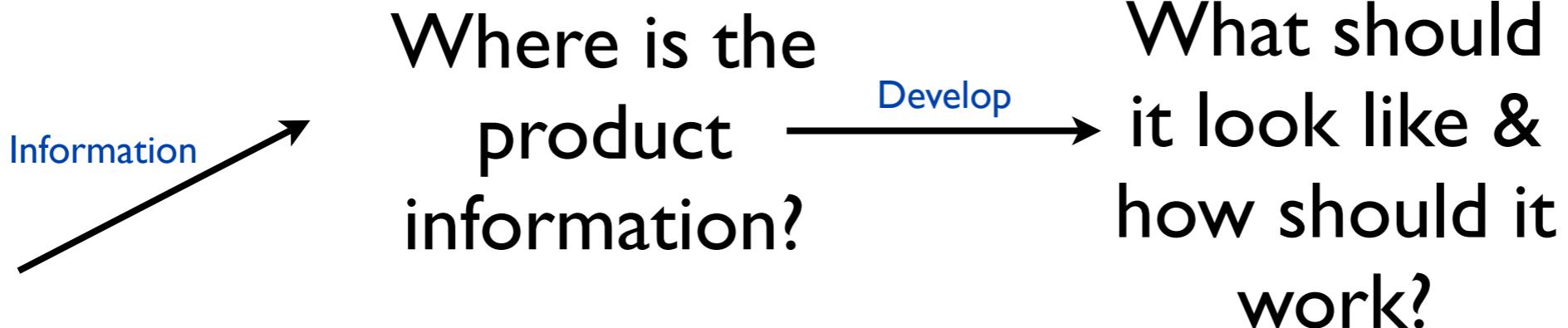
# Building an online store



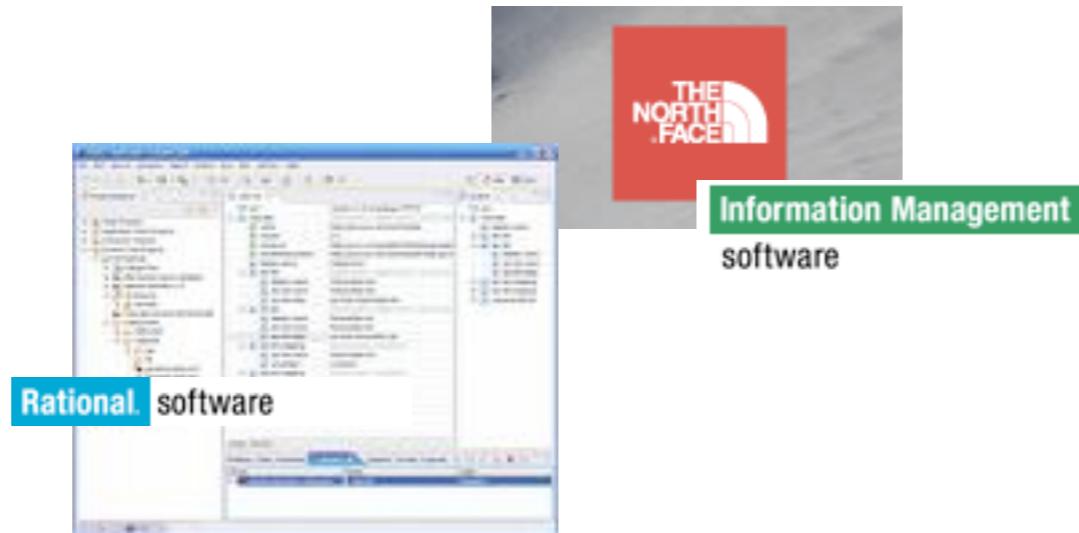
We want to  
sell our  
coats online



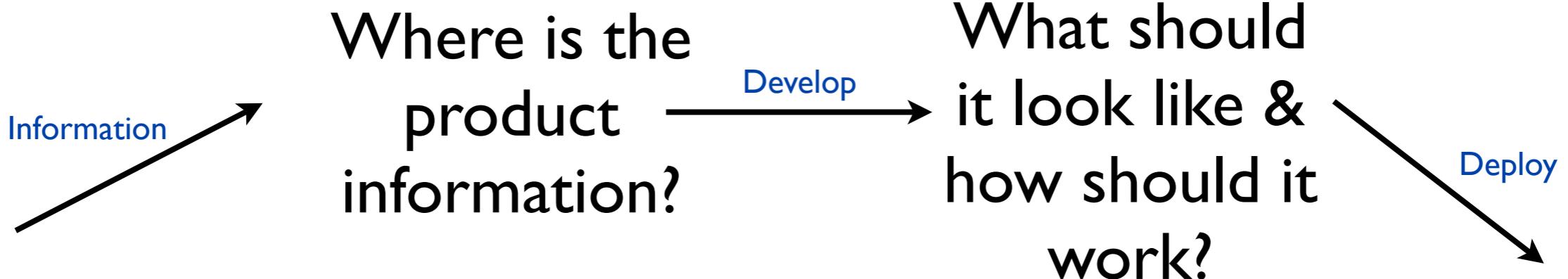
# Building an online store



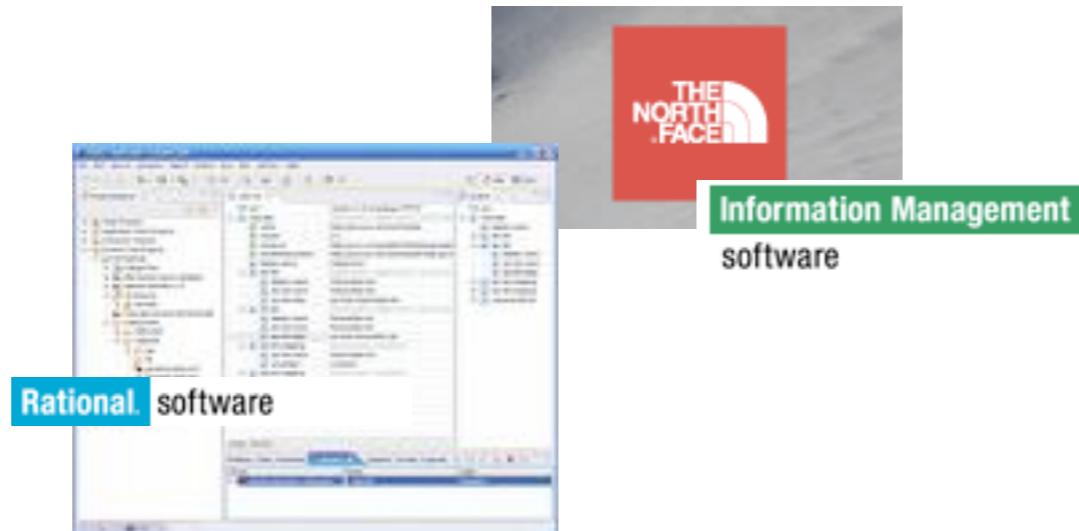
We want to sell our coats online



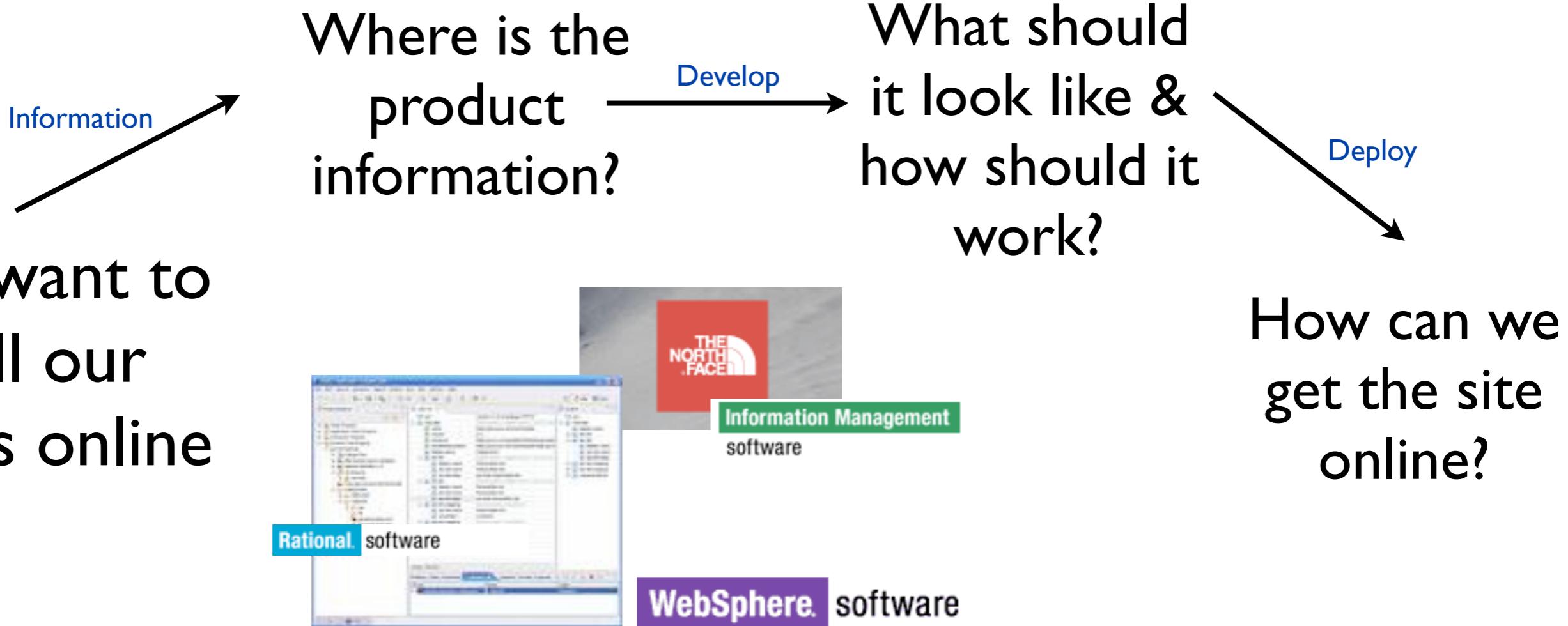
# Building an online store



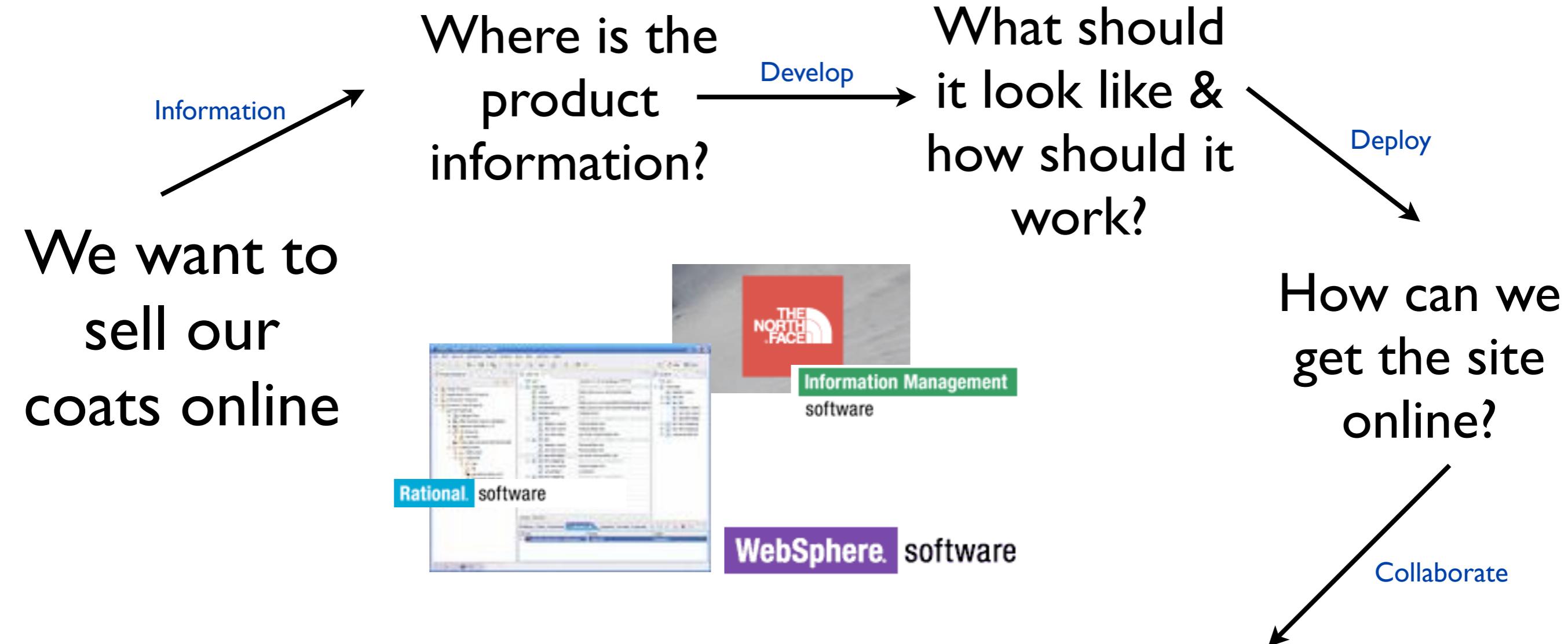
We want to sell our coats online



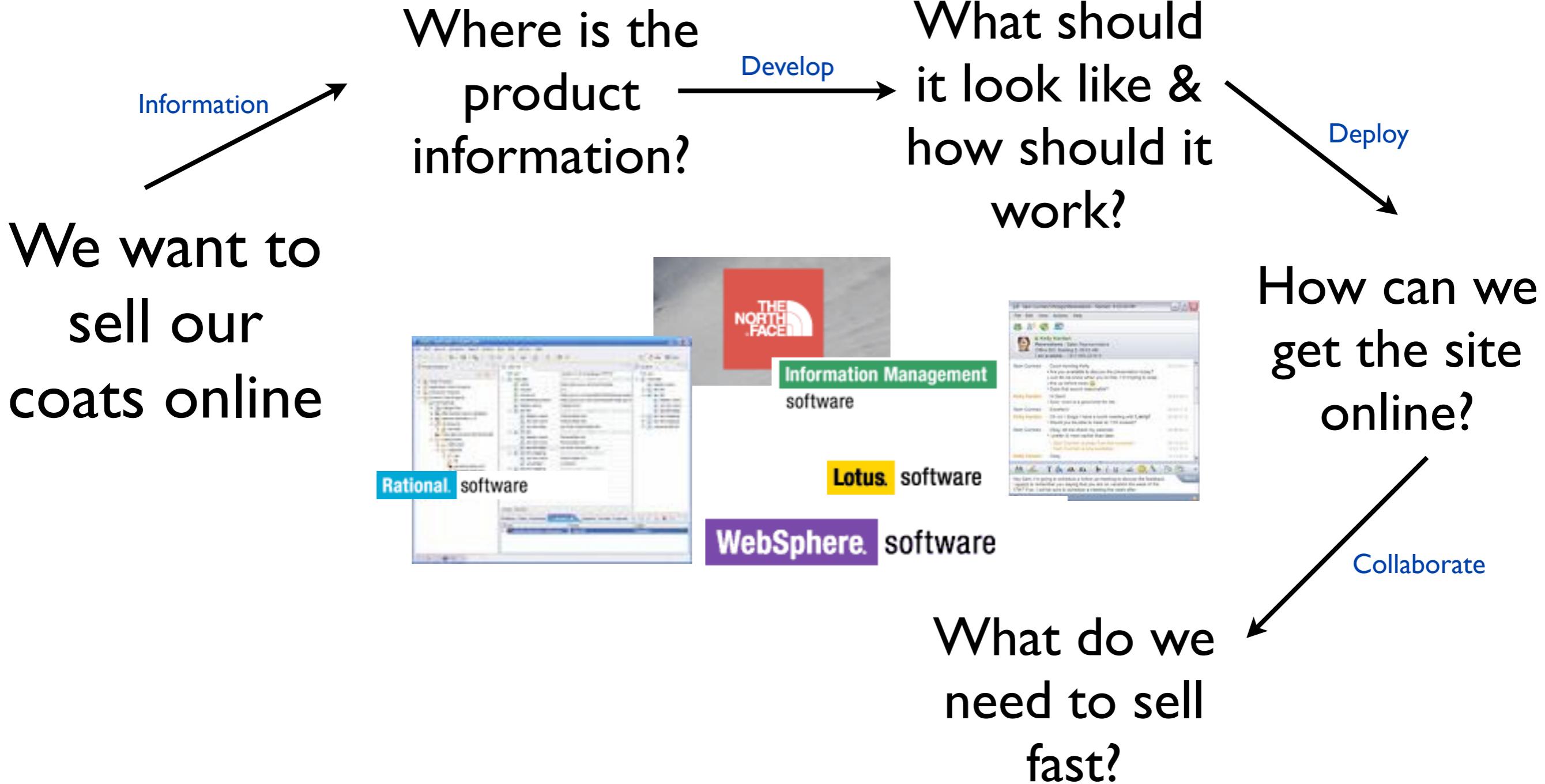
# Building an online store



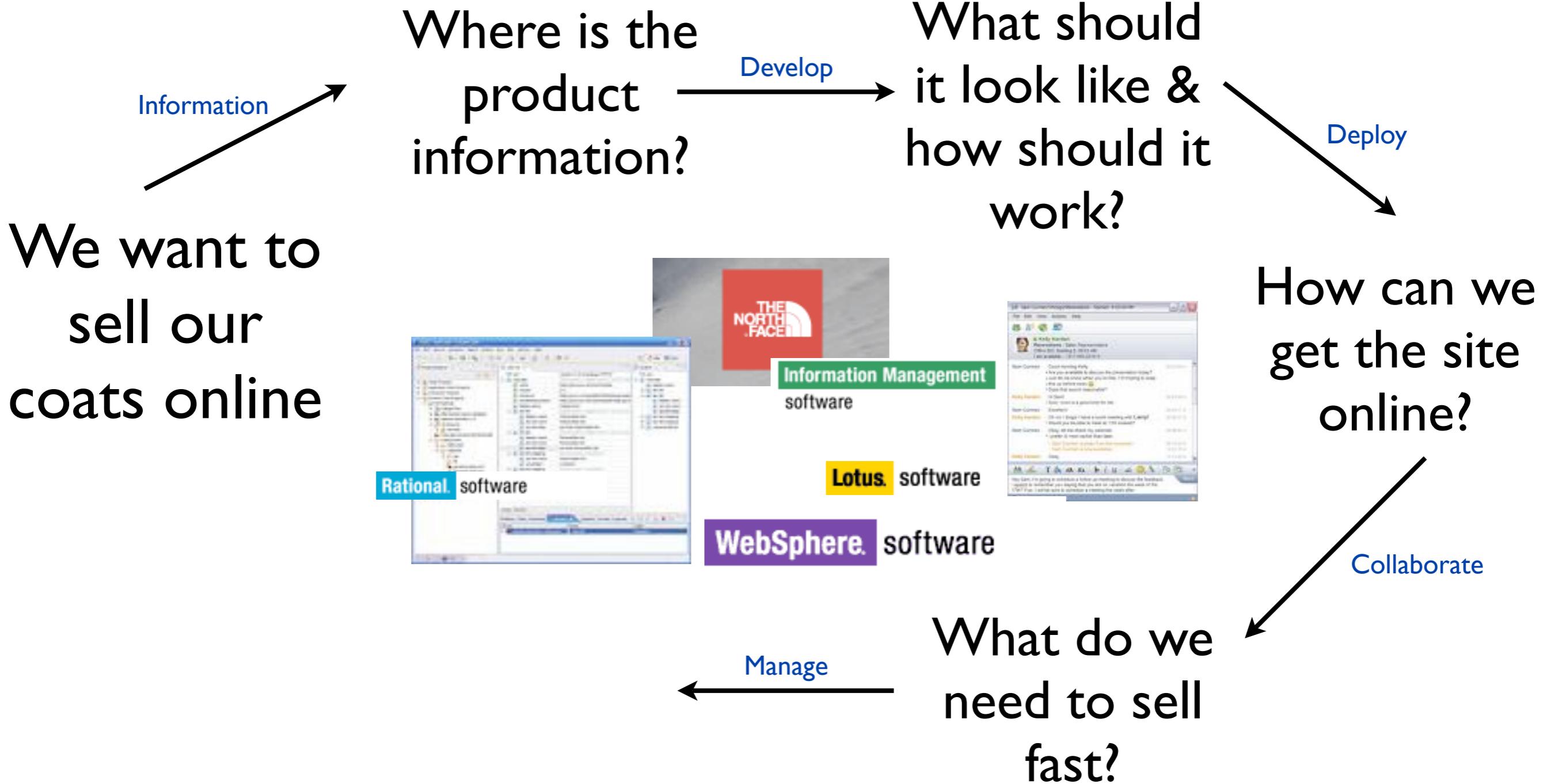
# Building an online store



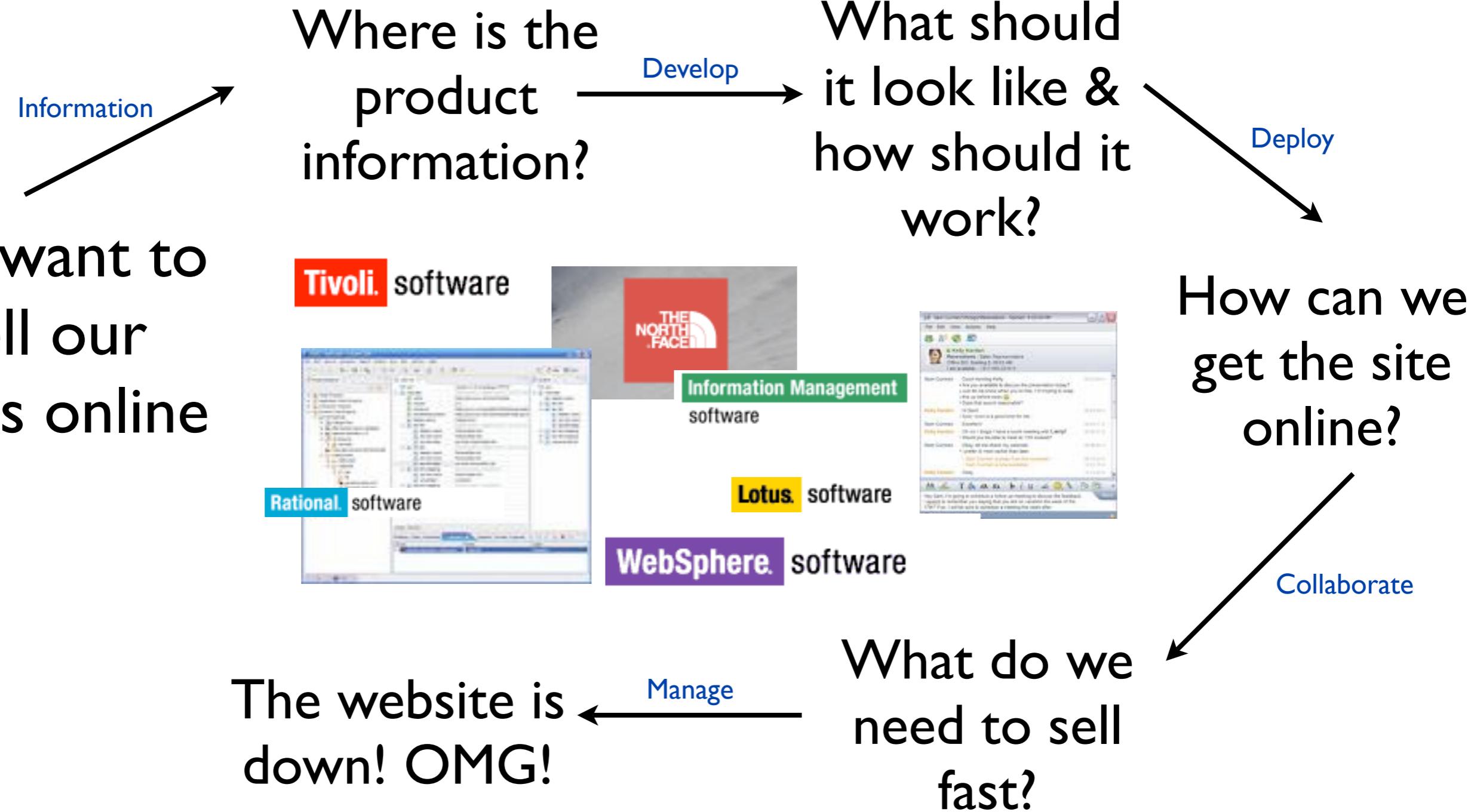
# Building an online store



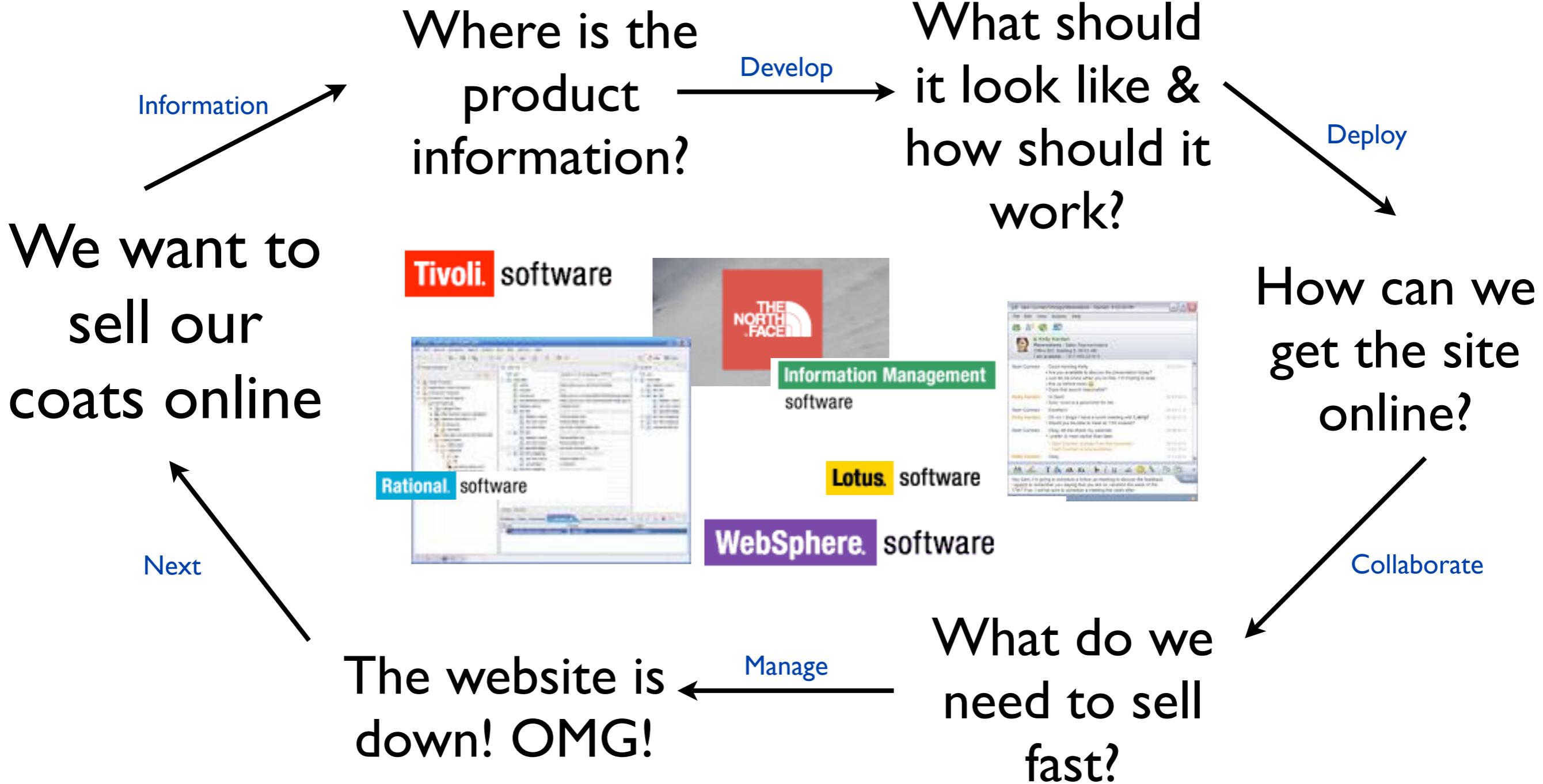
# Building an online store



# Building an online store



# Building an online store



# People we work with



**Nick**  
Media Designer



**Patricia**  
Technical Sales



**Sacha**  
Consultant



**Erin**  
Writer

# Teamwork and Collaboration

**w3 Media Library**

Browse media

To filter the results, enter tags  into the box below and then click Add. This will show you only the media that has those tags associated with it. You can also search by title or description.

Filter media

Media

DB2

Video Contest

Watch videos: most recent

Sort videos by:

Most Viewed, E-mailed, or Top Rated | Submitter's Location, Division/BU, or Name | Video Title

Watch videos

Popular

Most recent

by B/U/City

by Title

ate videos

nter the contest

about the contest

rizes

The Winners

Related links:

- This week
- Last week
- Two weeks
- Three weeks
- Four weeks

**YouTube**

Watch videos: most recent

Sort videos by:

Most Viewed, E-mailed, or Top Rated | Submitter's Location, Division/BU, or Name | Video Title

INNOVATION FOR BETTERMENT

Azees D Baig  
2/12 14:22  
\* 12 \* by 121 people  
Viewed 519 times

INNOVATE ANYWHERE ANYTIME

Sachin K Jha  
2/10 17:59  
\* 12 \* by 90 people  
Viewed 220 times

SUCCESS

Martin Recktenwald  
2/10 02:36  
\* 12 \* by 94 people  
Viewed 264 times

Continuity that matters

IBM PODCAST

The IBM Museum of Natural History

**IBM. bee hive**

home profile people photos hive5s events

**facebook**

Welcome to IBM Lotus Connections

Use the Home page to access the latest updates to your activities and interests in Lotus Connections. View up-to-the-minute information from your colleagues, blogs, and communities, and arrange the display of information to suit your preferences.

Learn more Watch demo

**w3 Agile @ IBM Home**

WikiCentral Home > Agile @ IBM > Home

Published on Jul 09, 2008

Getting Agile@IBM

**w3 Bluepedia**

Home Find articles Authoring Bluepedia community

Bluepedia is the g  
co-authored by IE  
entries, written by

**Lotus. Connections**

Home Profiles Communities Blogs Dogear Activities

Dogear

All Bookmarks Popular My Bookmarks My Updates

New to Dogear?

Collect and organize bookmarks to Web sites. Assign your own tags to the bookmarks with others.

Start by installing the "Bookmark this!" button to your browser toolbar. Click the button to create a bookmark. Click below to get started!

Get Started Learn More Watch demo

**digg**

**del.icio.us**

0 agile analyst\_report architecture blog blogs books on business career cloud cloud-computing collaboration community comp competition competitive competitors

Please join my FreeJam. Thanks! [started: 9:23:42 AM]

File Edit View Tools Help

Participants (13)

L M (Luis) Suarez Rodriguez Knowledge Manager, Community Builder and Social Computing Evangelist +34-928-148260 / El Tablero de Maspalomas, Las Palmas, ES / 3:27 PM

... pazzagmp@us.ibm.com - include me in your invitation if available

Melissa Marroso I'd be happy to Luis - a few leading questions/suggestions/topics would be good reminders to work in it

Carol Eberhardt hello, I am leading a Knowledge Cafe call, sorry

Luis Suarez Yes, that is what I thought, Lynn, from the list of folks over here, how many are ThinkPace Catalysts or Master Catalysts?

willmorr@us.ibm.com would it be worth taking a look at Quickr - by July there will probably be community support

Luis Suarez Thanks, Carol, for dropping by.

Lynn K. Busby we need to work to make KCblue an example of BP - tie in ThinkPlace and communities

Carol Eberhardt must drop thanks

Matthew Simpson Matthe... or Connections

... Carol Eberhardt left the chat. ...

Luis Suarez Thanks, Melissa, we will do so, no problem.

Send

**BLUEPEDIA**

WIKIPEDIA The Free Encyclopedia

Articles Inventory

Featured article Managing complex content development

# In Second Life



# High School Courses



<http://blue.utb.edu/usslabs/MS%20SEMINARS/workshopweb/images/students-at-computers.jpg>

# High School Courses

Interested in making  
Software?

Interested in what goes  
on inside your computer?

**Consider ICS 20**

- Programming
- Software use and manipulation
- Logic

**Consider ICE 20**

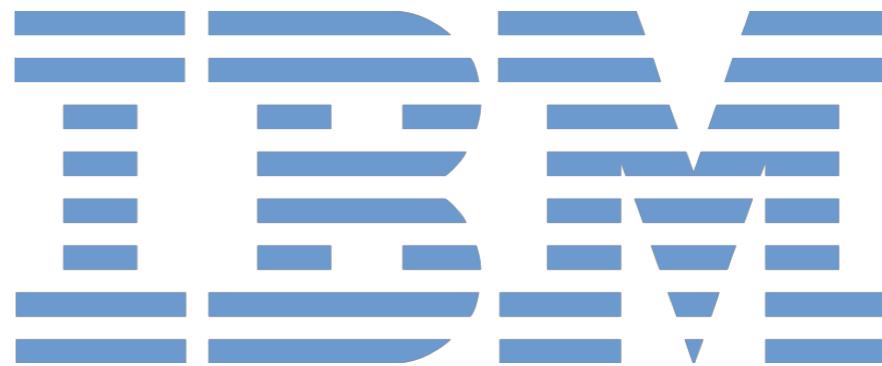
- Hardware manipulation
- HTML
- Number representation

Technology is everywhere!

These courses will provide you insight into the technology around you

# We are...

- Julia Baldwin  
([liaison@cis.uoguelph.ca](mailto:liaison@cis.uoguelph.ca))
- Michael Wirth  
([mwirth@uoguelph.ca](mailto:mwirth@uoguelph.ca))
- CISters ([www.cisters.ca](http://www.cisters.ca))
- Computing and Information Science, University of Guelph  
([www.cis.uoguelph.ca](http://www.cis.uoguelph.ca))
- Jennifer Schachter
- Deirdre Athaide
- [outreach@ca.ibm.com](mailto:outreach@ca.ibm.com)
- IBM Canada (ibm.ca)



# Questions

