



# CBSA Usability Program

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- ❖ **Why have a program**
- ❖ **Key parameters**
- ❖ **Our journey**
- ❖ **The future**
- ❖ **The reality**



## ❖ **Standardization**

- Not every programmer or business rep is a good interface designer
- Unnecessary variations not helpful to end-users
- Unattractive or confusing interfaces can kill the best products

## ❖ **Efficiency**

- Users more productive
- Operational and policy goals in balance
- Training requirements reduced

## ❖ **Integration**

- Facilitate iterative product development and evolution of business processes

## ❖ **Discovery**

- Powerful tool for discovery or confirmation of the user requirements



## ❖ Objectivity

- Only someone else can tell you your baby's ugly
- Can't argue with facts

## ❖ Rigour

- Must be based in science not art to be accepted
- Must be faithful to the operational reality

## ❖ Buy-in

- Remember that you are dealing with people and culture
- Management must buy-in
- Reward and recognize the teams who adopt the practice

## ❖ Early

- Mistakes are always easier to correct up front rather than after the product is delivered



## ❖ Standards Committee

- We had standards for 'green' screens – the vastly more interesting GUI made having standards more important
- Nobody reads standards and standards only reduce the chaos
- Something more is needed

## ❖ Separate Team

- Recognize 'usability' as a competency requiring specialized training and methods
- Consistent and objective
- Global perspective

## ❖ Management Team

- Management must understand why they need it
- Management must always be reminded that they agreed they needed it

## ❖ Pioneers

- Rome wasn't built in a day – it's a journey
- Reward, recognize and encourage your early adopters
- Pick your battles
- Build on success



## ❖ Process

- Entrench in the development process
- Make it early
- Discover and illustrate the requirement – how do people really do their jobs
- Process reengineering – what if we wanted to change the way people do their jobs
- Periodic review – ever-greening


## ❖ Partnership

- Create a demand – from management and development teams – help them be successful
- Participation and commitment of end-user community



- ❖ **How the team operates**
- ❖ **Successes & failures**
- ❖ **Status and prospects**





# Usability at CBSA: Where Are We In The Journey

Peter Aubin, PhD  
Usability Researcher

Thursday, December 8, 2005

- ❖ **Make-up**
  - 4 UI designers, 3 researchers
- ❖ **Where usability sits now in the organization**
  - Architecture team
- ❖ **Where we work**
  - Different from business and development
  - Work with both domains
    - ❖ Problem in need of a solution
    - ❖ Post-deployment in the field
- ❖ **Usability: A formal discipline**



- ❖ **“Start with the end in mind”** (Stephen Covey)
  - Clear picture of User-centered design (UCD)
  - It’s about supporting the Vision of CBSA
- ❖ **“Seek first to understand”** (Stephen Covey)
  - Designing tools that support users in meeting business goals
  - Provide value where projects are at
    - ❖ Empathizing with stakeholders
  - Losing track of the UCD methodology
    - ❖ Risk to providing unique value



## ❖ What is CBSA about?

- Pre World Trade Center
  - ❖ Duties, taxes, “Welcome to Canada”
- Post World Trade Center
  - ❖ Interdicting threats (post 9/11) - Reactive and proactive

## ❖ Users in the field

- Travellers, goods, program enrolment, supporting roles
- A delicate balance and demanding conditions
  - ❖ Do it fast and do it well
  - ❖ Physical environment, health and safety

## ❖ Need to focus on the user experience

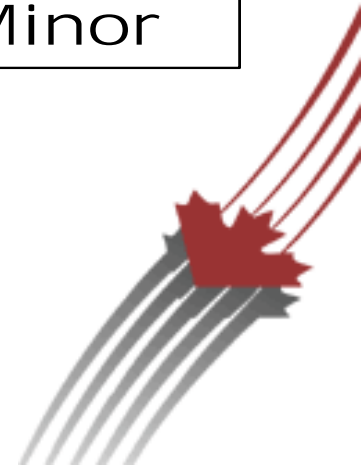
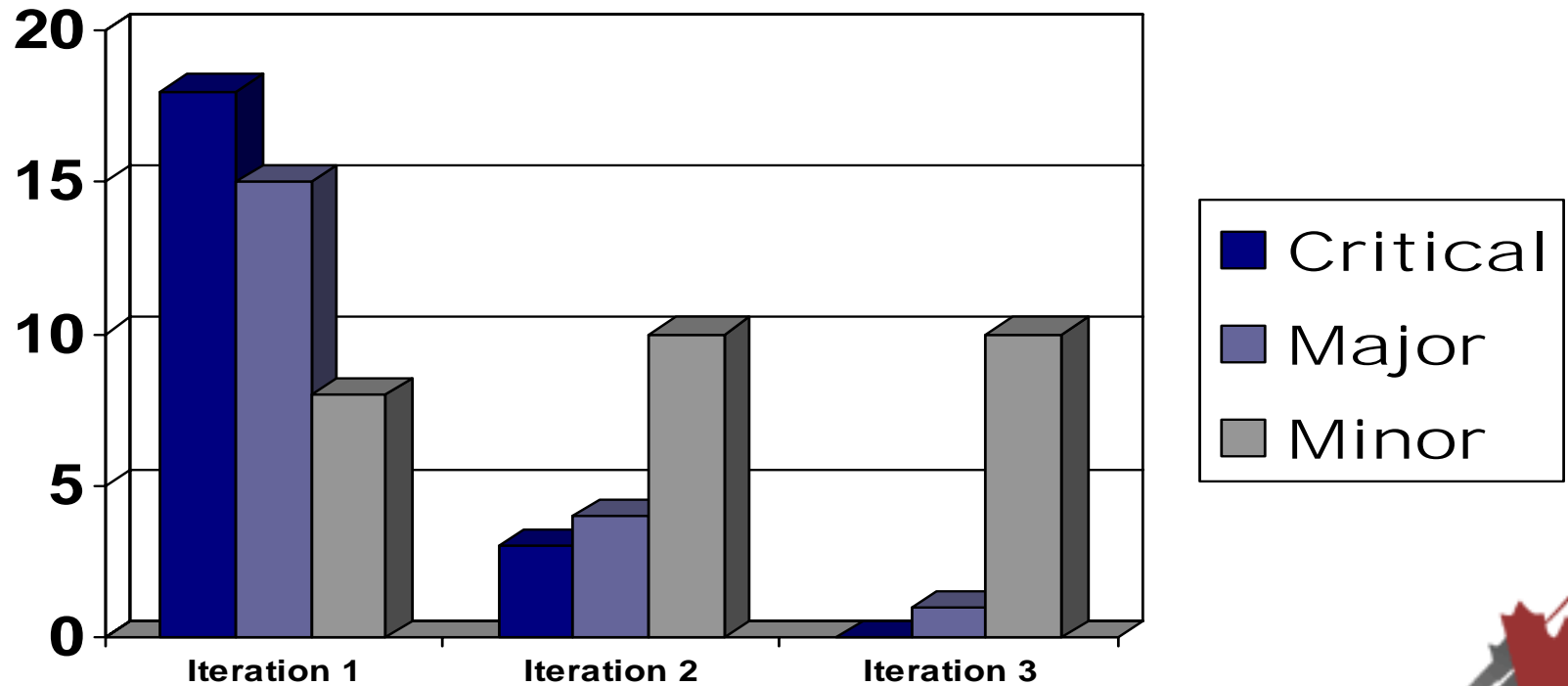
- Formal methodology for achieving usability
- Tie the loop: what is being done, what is not and why



- ❖ **“Ok, that didn’t work. So how do we make usable products?”**
- ❖ **How usability evolved – Successes and Challenges**
  - Introducing UCD - Research and design
  - Demonstrating value where opportunities arise
    - ❖ First success - NEXUS Highway
      - Effective and efficient processing of travellers
    - ❖ Piecemeal influence - Titan
      - Effective and efficient processing of goods



## Pre-development UCD



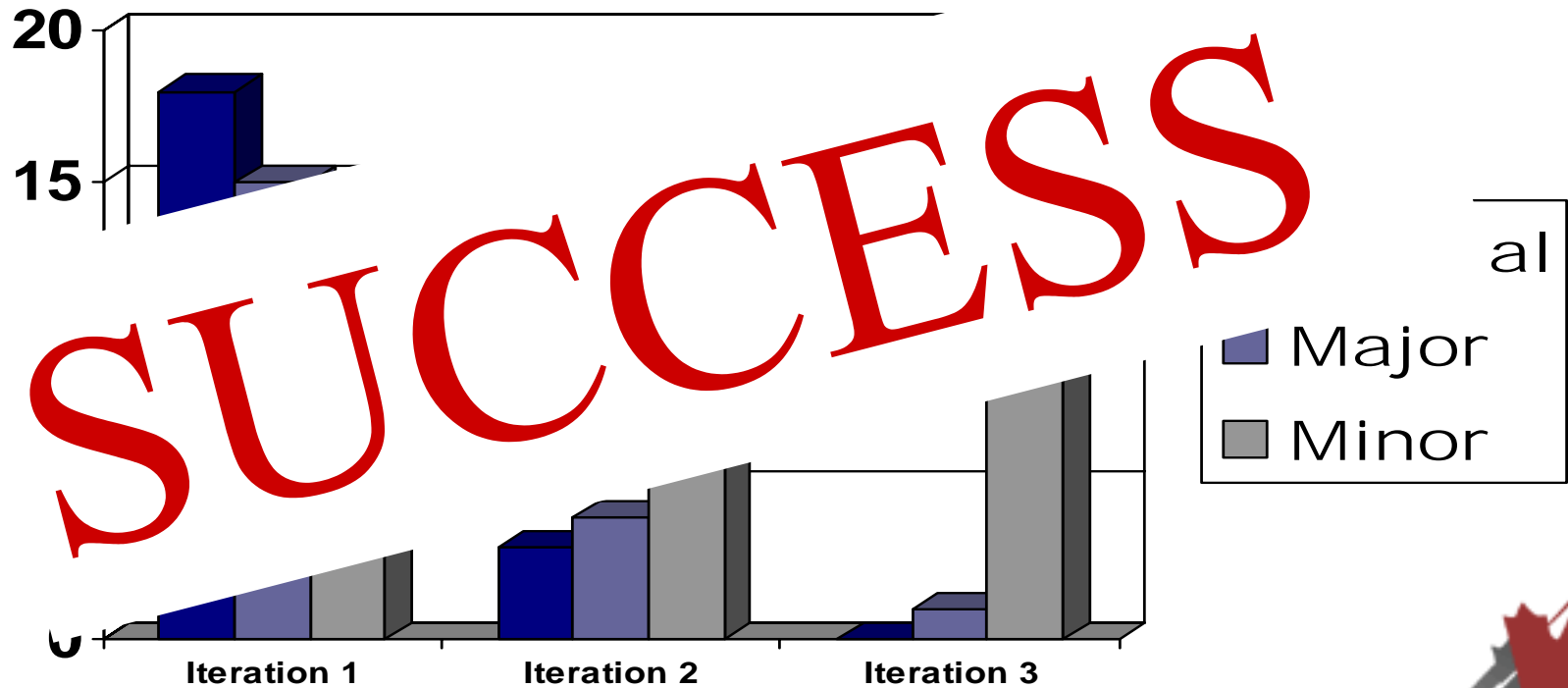
## Pre-development UCD

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- ★ No critical usability issues
- ★ One major issue for technical reasons
- ★ Minor issues do not impact business goals
- ★ In the field and with no requests for changes (CRs)

**UCD is predictive of value in the field**

## Pre-development UCD



- ❖ **Initially strong stakeholder enthusiasm for usability**
- ❖ **Fundamental roadblocks**
  - Heavy time pressure for delivering
  - “We weren’t on the books as a discipline”
  - Successful only if given authority to follow User-centered Design
  - “We already do that”
  - The premature solution box
- ❖ **Usability improved on some aspects of the product**
  - Mostly visual, some interaction, little structural
  - Usability is mostly about structure and interaction (80%)
- ❖ **In the end there were:**
  - Large numbers of requests for changes after product deployment in the field
  - Lack if UCD impacts efficiency of fixing process
  - Delays in subsequent releases because of needed changes
- ❖ **But tough projects are just as important as easy ones**



# How usability gathered momentum

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- ❖ **Keep focused on what UCD needs to be in order to deliver full value**
  - No one else can
- ❖ **Bottom-up and top-down approach**
  - Know the people around you and their needs
  - Find champions and support them
- ❖ **Recognize opportunities**
  - Provide value where you can at a level people understand
  - Building on success to show there's more
- ❖ **Look for a breakthrough project**
  - Demonstrates value of UCD to stakeholders



# How usability gathered momentum

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## ❖ Different roadblocks for different folks

- Researcher vs UI designer
- Business vs IT
- Phase of development

## ❖ Flexibility / Adaptability

## ❖ How do you know if the product is delivering the needed value

- Quantitative business goals/ success metrics/ quantitative critical success factors

## ❖ Don't lose sight of who you are

- Walk the talk
- Something we believe in



## ❖ The phases of usability in an organization

- Phase 0: Unaware
- Phase 1: Usability here and there
- ➔ **Phase 2: Usability on its way to integration**
- Phase 3: Usability entrenched in business and IT processes
- Phase 4: Getting enough researchers and UI designers
- Phase 5: Usability: No products built without it

[Described by Schaffer, Eric (2004). *Institutionalization of Usability*. Addison-Wesley]



## ❖ Keep doing what we've been doing

## ❖ And take these next steps

- User-centered design officially entrenched in the business and IT processes
- Money allocated upfront specifically to user-centered design
- Authority
  - ❖ Clearly defined roles and responsibilities officially recognized and entrenched in the organizational structure
- Strong and flexible core usability team with appropriate branding:
  - ❖ Researchers, UI designers
  - ❖ “Usability architect”: special management needs / strategy
- Work within multi-disciplinary project teams
- Marketing: Champions in an organization come and go



## ❖ **Sustaining the team is essential**

- Strong sense of humour and teamwork
- Strategize, share
- Chat about successes and challenges
  - ❖ Within the team, with supporters
- Challenges are opportunities

## ❖ **Keep focused on the goal**

