

MedPost: A MANAGEMENT SUPPORT SYSTEM FOR LARGE ADVERSE EVENTS

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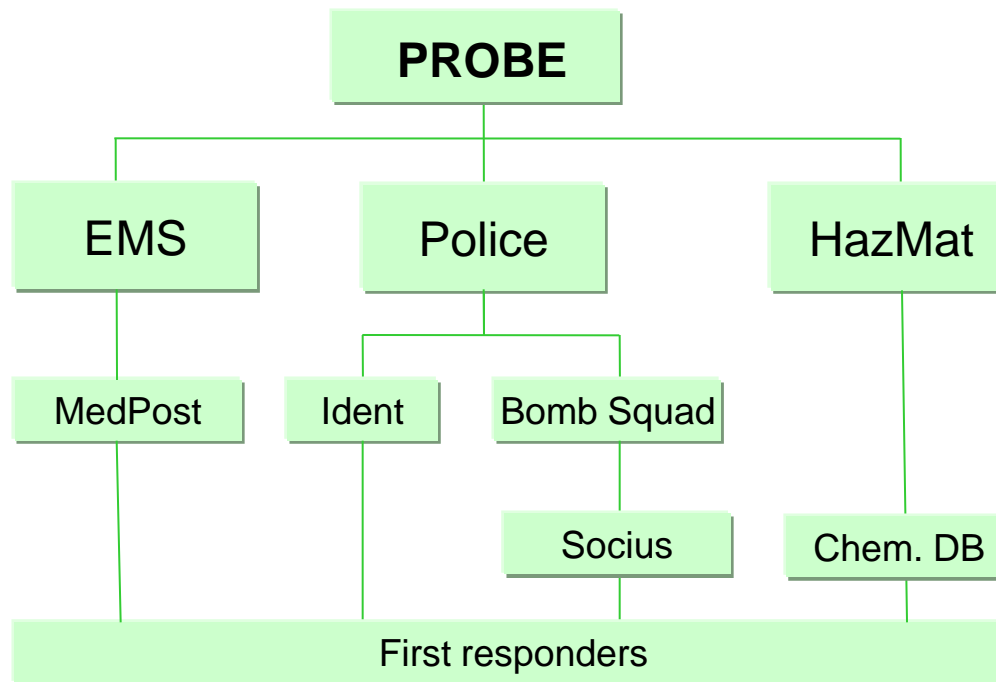
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Today's talk

- PROBE: The big picture
- MedPost outline
- Issues addressed in MedPost
- User-Centred Design (UCD) approach
- Current status of MedPost

The big picture

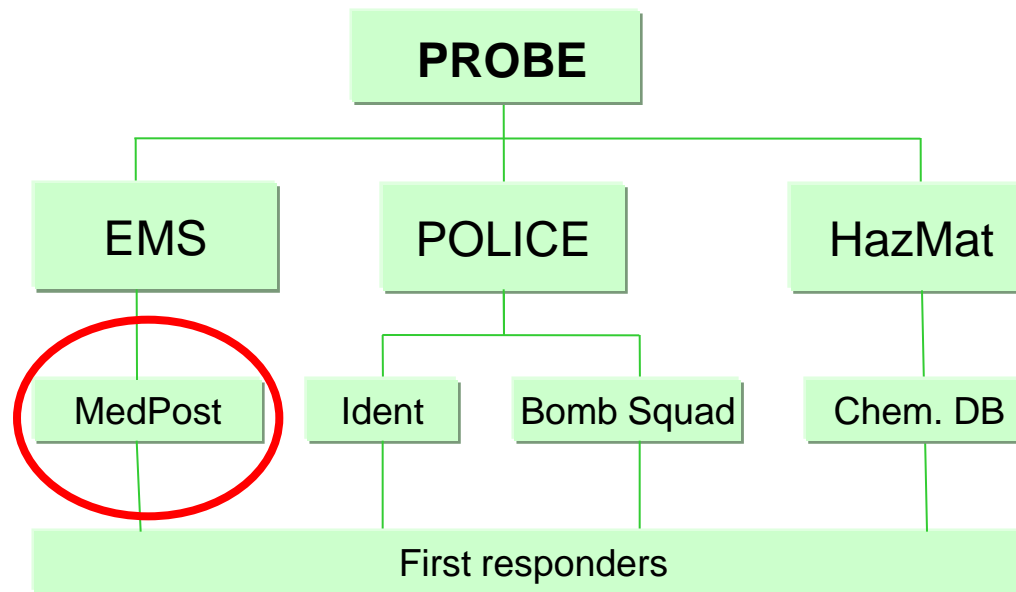


Existing/ongoing system/prototype development

- HazMat
 - PEAC (Palm Emergency Action for Chemical)
 - CoBRA (Chemical Biological Response Aid, US)
 - CoBRA-PEAC Integration Package (CPIP)
- Police
 - Bomb Squad support: SOCIUS
 - Ident: RFID tags
- EMS
 - MedPost
 - RTMW



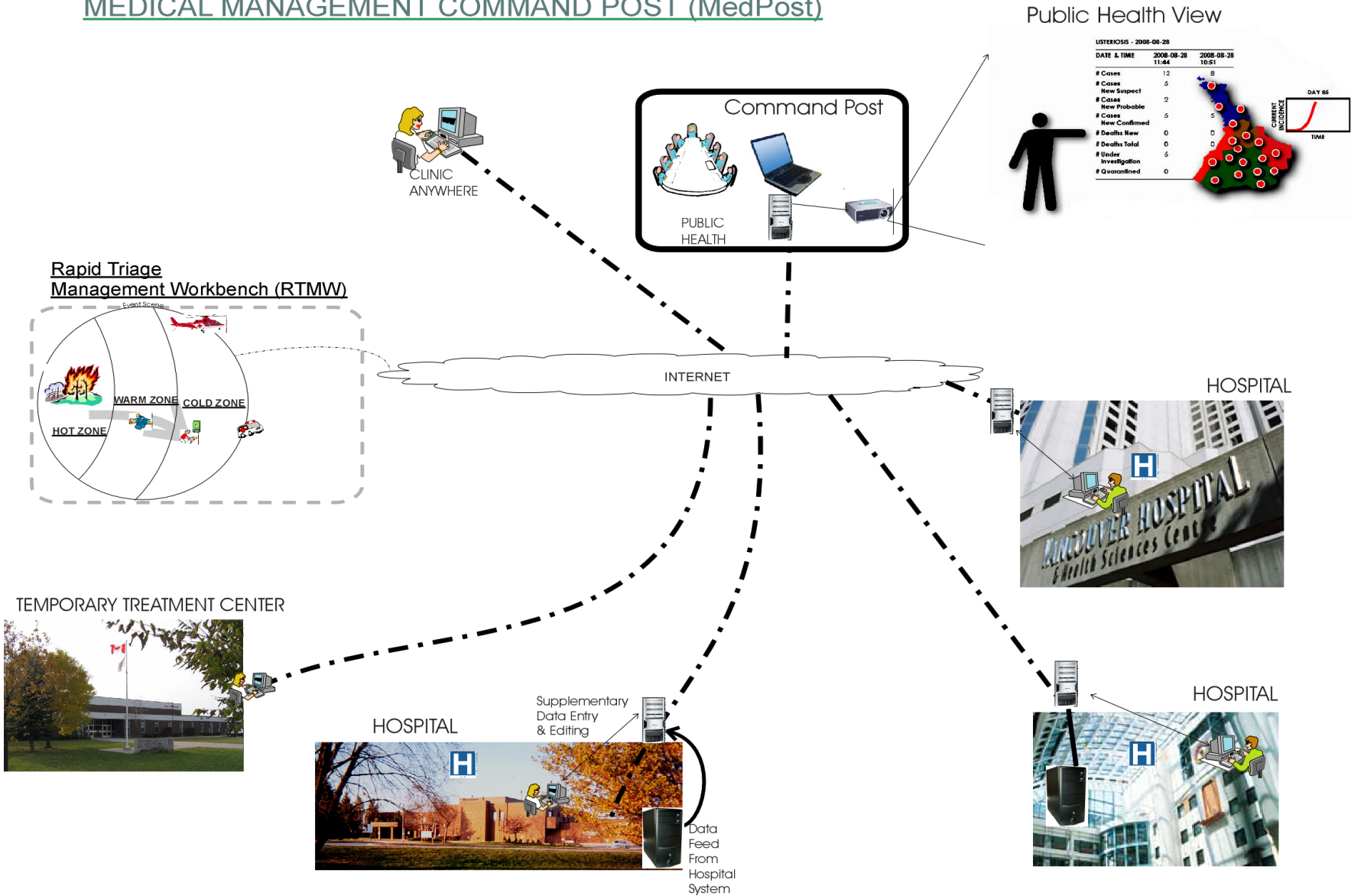
The big picture



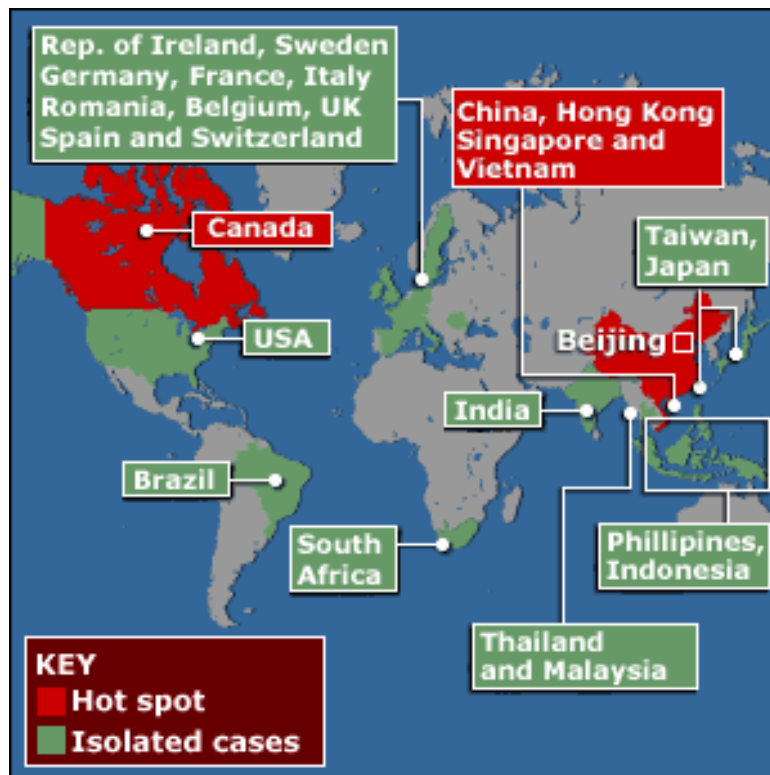
The MedPost project

- Objective
 - Develop a centralized, deployable e-medical & casualty management support system providing health care management information to all levels of health care crisis management authorities (local, Provincial, Federal) with the necessary data to reduce morbidity and mortality due to Chemical, Biological, Radiological, Nuclear, and Explosion (CBRNE) mass casualty events
 - It will
 - present an aggregate view of the essential information about casualties in one central place
 - enable integration of communications among on-scene responders, hospital staff, and members of the response communities involved in managing CBRNE events
 - Improve situation awareness of people involved in managing CBRNE events

MEDICAL MANAGEMENT COMMAND POST (MedPost)



Background: Severe Acute Respiratory Syndrome (SARS)



- 2003 Outbreak → major public health event
 - > 8,000 cases in 29 countries (744 fatal)
 - 438 cases in Canada (43 fatal)
- Ontario Ministry of Health & Long Term Care report
 - Of 23 serious problems, 4 addressed in MedPost

Issues addressed in MedPost

MedPost GW

DASHBOARD **LINE DATA** **SEARCH** **HIDE** **PRINT** **LOG OUT**

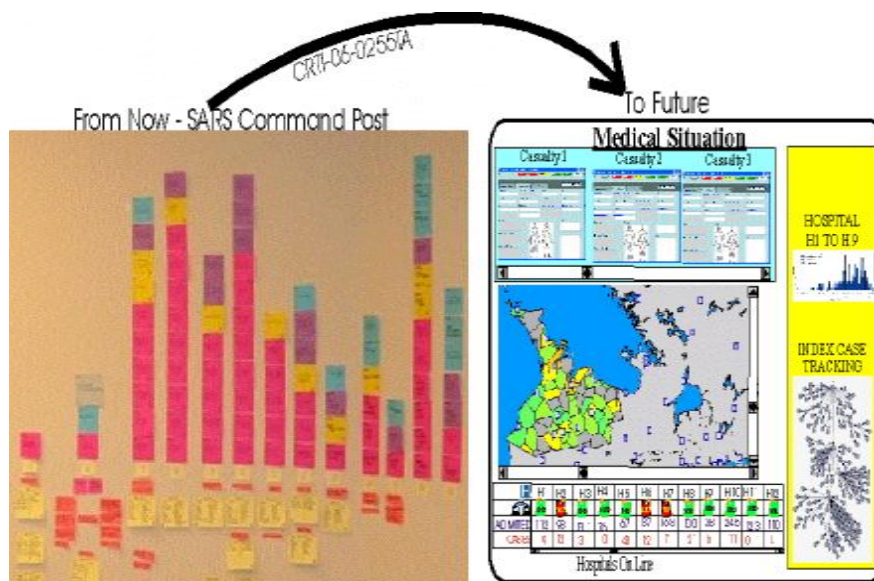
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LINE DATA: GBHU H1N1 Test 1

MedPost ID	Name	Age	Gender	Current Status	Current Status Date	Prior Status	Current Location	Room Number	Differential Diagnosis	Case Status	Case Status Date	Travel History	Occupation	Town	Partial Postal Code
10143	Gateway Case 1, Gateway Case 1	89	-	Fair	2010-04-20	-	-	-	H1N1	Probable	-			-	
10144	Gateway Case 2, Gateway Case 2	87	-	Critical	2010-04-20	-	-	-	H1N1	Confirmed	-			-	

1. Overwhelming and disorganized information demands
2. Inadequate data quality
3. Duplication of central systems
4. Blockages of vital information

1. Overwhelming and disorganized information demands



- Prevent information overload
 - Clearly define roles of all involved
 - Clear tasks for each role
 - Ensure that everyone knows their own role and that of others involved in managing the event
 - Only 1 person in charge of event
 - That person has the 'big picture'
 - Only that person reports to the press, the minister

DASHBOARD

REPORT

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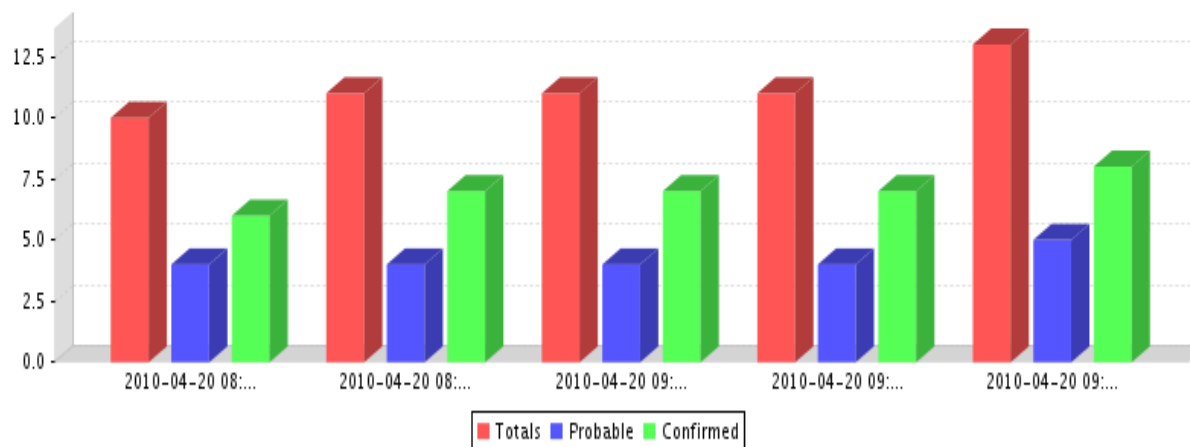
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Language Selections: English

Incident Summary Report



2. Overcoming inadequate data quality

- MedPost will provide continuous data flow via Rapid Triage Medical Workbench (RTMW) between on-site EMS, hospitals, public health ensures accurate up-to-date information from all sources



Issues addressed in MedPost

3. Preventing duplication of central data systems &

4. Avoiding blockages of vital information

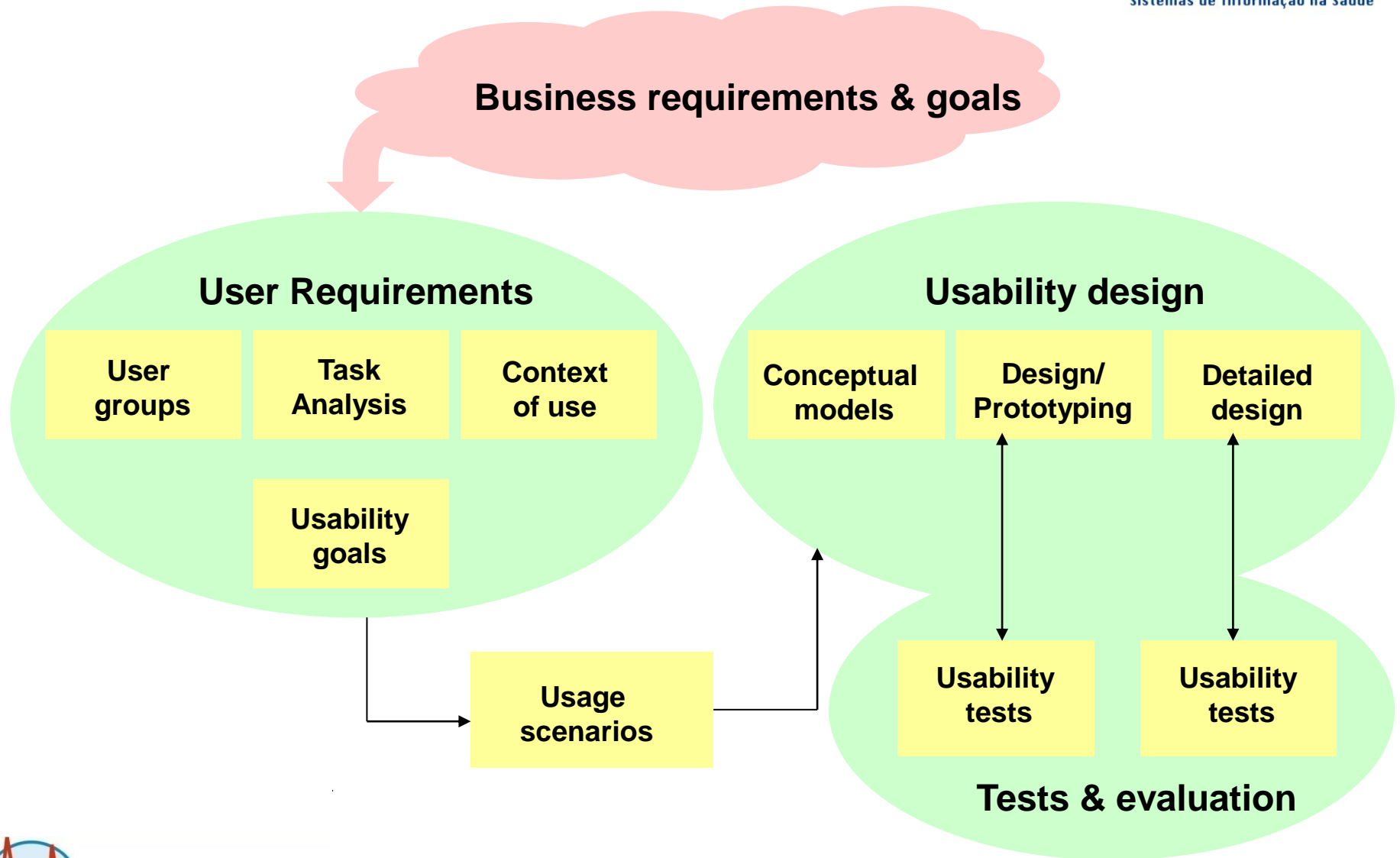
– MedPost provides

- A central database
- A standard information system for all public health branches and all public health units
- Standardized information

User-Centred Design (UCD) approach

- Focus on users
 - Who are they?
 - What will the software do?
 - How do users do their work now?
 - Where will the software be used?
 - When will the software be used?





Usage scenario: Explosion

- Only a few minutes ago, you listened to the 10AM CBC radio-1 news in which a terrifying accident in Montréal's Central station was reported. The magnitude of the disaster is not yet known. It is unclear if a highly toxic gas has been accumulating in the city's ageing sewerage system that runs underneath the railway net, or if this is an act of terrorism. Members of the public have apparently been complaining about extremely foul smells in the streets of Old Montréal around that area for over two weeks. However, because of the garbage handlers have been on strike for the past four weeks, it was believed that the accumulating garbage in the streets was the source of the smells.

DASHBOARD

LINE DATA

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LINE DATA: GBHU H1N1 Test 1

MedPost ID	Name	Age	Gender	Current Status	Current Status Date	Prior Status	Current Location	Room Number	Symptoms	Symptom Onset Date	Differential Diagnosis	Isolation	Case Status	Case Status Date	Travel History	Occupation	Admitting Diagnosis	Town	Partial Postal Code
101	Case 1 1, Case 1: 1	21	-	Fair	2010-04-05	-	GBHS Owen Sound	1	Fever Greater than 38.0	2010-04-05	Possible H1N1	Yes	Confirmed	-	Recently returned from Mexico 03-31-2010	Clerical Staff		-	N3
1011	Case 1 11, Case 1: 11	21	-	Serious	2010-04-05	-	GBHS Owen Sound	11	Fever Greater than 38.0	2010-04-05	Possible H1N1	Yes	Probable	-	Recently returned from Mexico 03-31-2010	Clerical Staff		-	N3
1013	Case 1 13, Case 1: 13	21	-	Critical	2010-04-05	-	GBHS Owen Sound	13	Fever Greater than 38.0	2010-04-05	Possible H1N1	Yes	Confirmed	-	Recently returned from Mexico 03-31-2010	Clerical Staff		-	N3
103	Case 1 3, Case 1: 3	21	-	Fair	2010-04-05	-	GBHS Owen Sound	3	Fever Greater than 38.0	2010-04-05	Possible H1N1	Yes	Probable	-	Recently returned from Mexico 03-31-2010	Clerical Staff		-	N3
105	Case 1 5, Case 1: 5	21	-	Stable	2010-04-05	-	GBHS Owen Sound	5	Fever Greater than 38.0	2010-04-05	Possible H1N1	Yes	Under Investigation	-	Recently returned from Mexico 03-31-2010	Clerical Staff		-	N3
107	Case 1 7, Case 1: 7	21	-	Critical	2010-04-05	-	GBHS Owen Sound	7	Fever Greater than 38.0	2010-04-05	Possible H1N1	Yes	Confirmed	-	Recently returned from Mexico 03-31-2010	Clerical Staff		-	N3
109	Case 1 9, Case 1: 9	21	-	Fair	2010-04-05	-	GBHS Owen Sound	9	Fever Greater than 38.0	2010-04-05	Possible H1N1	Yes	Probable	-	Recently returned from Mexico 03-31-2010	Clerical Staff		-	N3
10141	Case 15, Case 15	56	-	Serious	2010-04-20	-	-	-			hjhjhjhjh		Under Investigation	-				-	
10142	Case 16, Case 16	43	-	Serious	2010-04-20	-	-	-			ty		Confirmed	-				-	

MedPost: Current status



- Advanced prototype is currently being field-tested in Grey Bruce
 - Medical Officer of Health (MOH) view
 - Infection control view
 - 12 hospitals
 - Several nursing homes
 - 2 health units
 - Major nuclear reactor in area

Acknowledgements:

Bruce Tsuji

Devjani Sen

Mark Mongeau

Sonnny Lundahl

Donn MacMillan

Malcolm Anderson

This research was made possible through Department of
National Defense grant CRTI-06-0255TA

Thank you for your attention

