The social media revolution: harvesting the potential to achieve transport Policy Goals

UNIVERSITY OF LEEDS

Fund for International Research Collaborations (FIRC)

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The “jungle” of Social Media and Social Networks

Online environment where content is created and exchanged for purposes that are primarily related to communities and social activities (Gartner Inc.)

Categories of Social Media

Forums and Messages Boards

Review and Opinion Sites

tripadvisor.co.uk

Social Networks

LinkedIn

Blogging

Blogger

Create a blog. It's free.

Micro Blogging

Bookmarking

reddit

Media Sharing

YouTube

Fundamental hypotheses of information harvesting

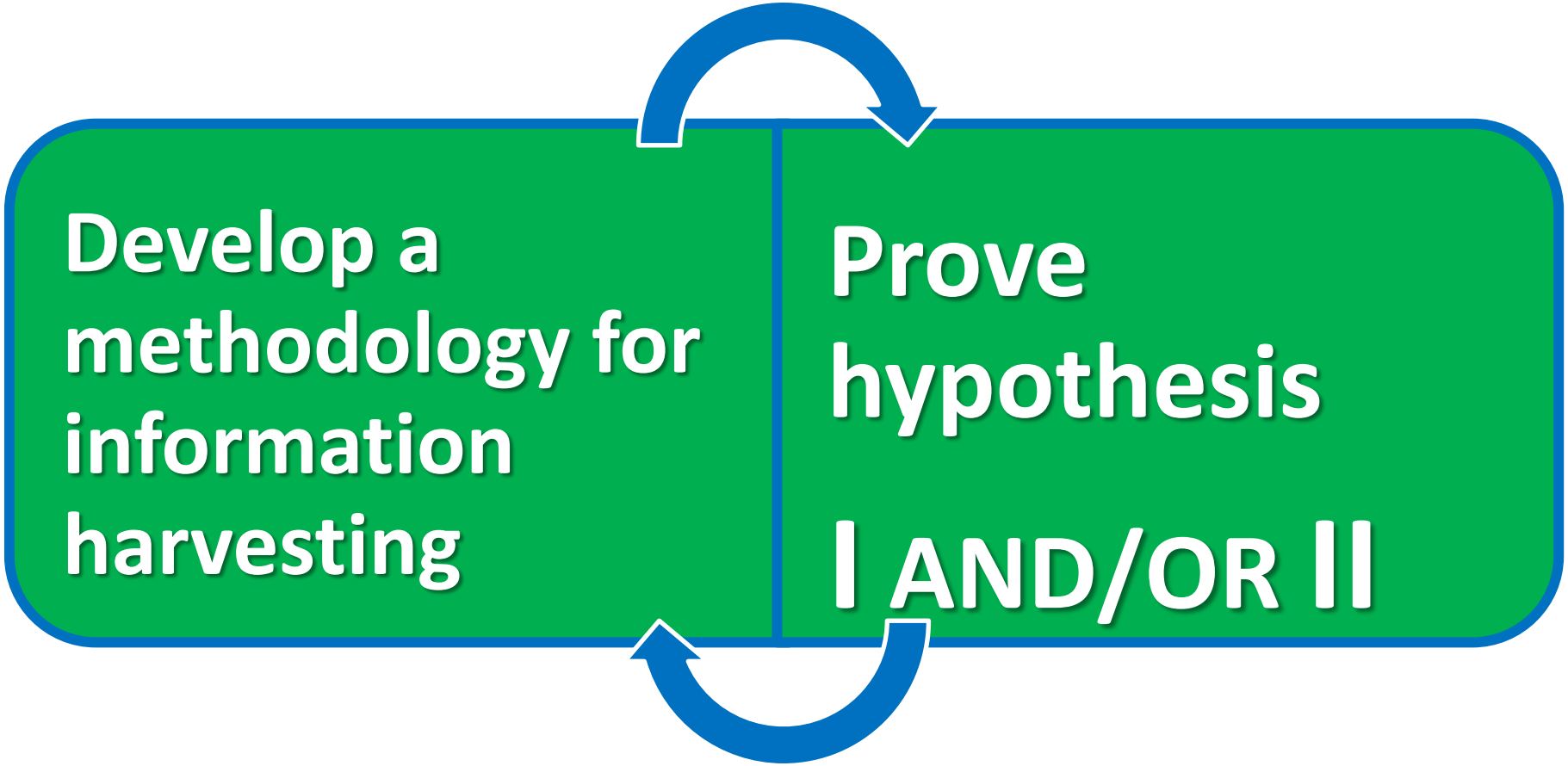
Hypothesis I

* Social media contains (or has a potential to contain) valuable information for transportation (mobility) planning and/or transportation management

Hypothesis II

* This information can be harvested

The egg and the hen dilemma



Main characteristics of social media content

Event Driven
(Current OR Planned)

The event has occurred recently or will occur soon

The user thinks that it is worth telling the world about it

What should we be looking for?

- **Need to get from origin to destination**

i live in downtown san jose and would need a ride to the concert and back

http://forums.depechemode.com/forum/showthread.php?t=19014

does anyone know which bus goes to the cross county center mall in yonkers. i live in new rochelle

http://help.com/post/158022-does-anyone-know-which-bus-goes-to

Adjust transportation modes to fit travel needs (short and long terms)

What should we be looking for?

- **Report an incident**

Guy tries to get away from cops screws up traffic MT @MassDOT Traffic Alert: Chelsea- Carter Street off ramp Rt 1SB Accident ramp blocked'

https://twitter.com/

Handle incident, notify public and integrate into journey planners (short term)

What should we be looking for?

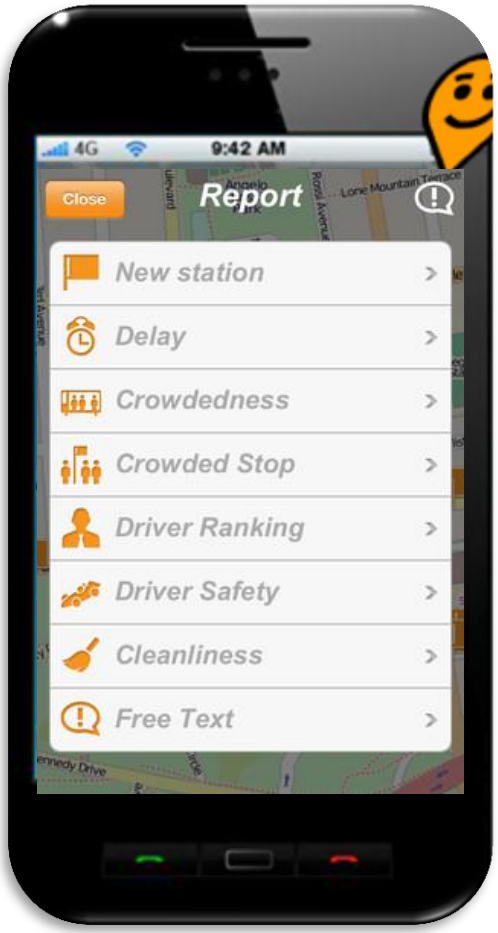
- **Comment about quality-of-service issues**

I actually just came back from gray line tour of visiting great ocean road. Trip was fine and thorough but it was ruined by this bus driver. .. this driver was screaming …It was just very rude.

http://www.tripadvisor.co.uk/ShowUserReviews-g255100-d2038346-r122274974-Gray_Line_Australia-Melbourne_Victoria.html

Improve quality-of-service (long term)

Structured Vs Unstructured information



Main issues to be addressed

- Analysis of text (ontology, slang)
- Integration of text and geographic data
- Reliability of information (representative samples, statistical significance)
- Integration with traditional sources of information
- Balance between automatic and manual processes
- Interoperability of methodologies (culture, language)

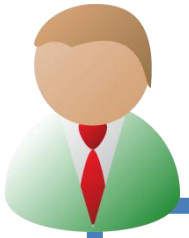
Research Focus – Transportation services to and from mass events

YOU'LL NEVER WALK ALONE
LIVERPOOL
FOOTBALL CLUB
EST·1892

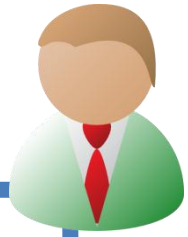
twitter

Identifying user generated posts

Transportation related Terms



500 transportation related posts



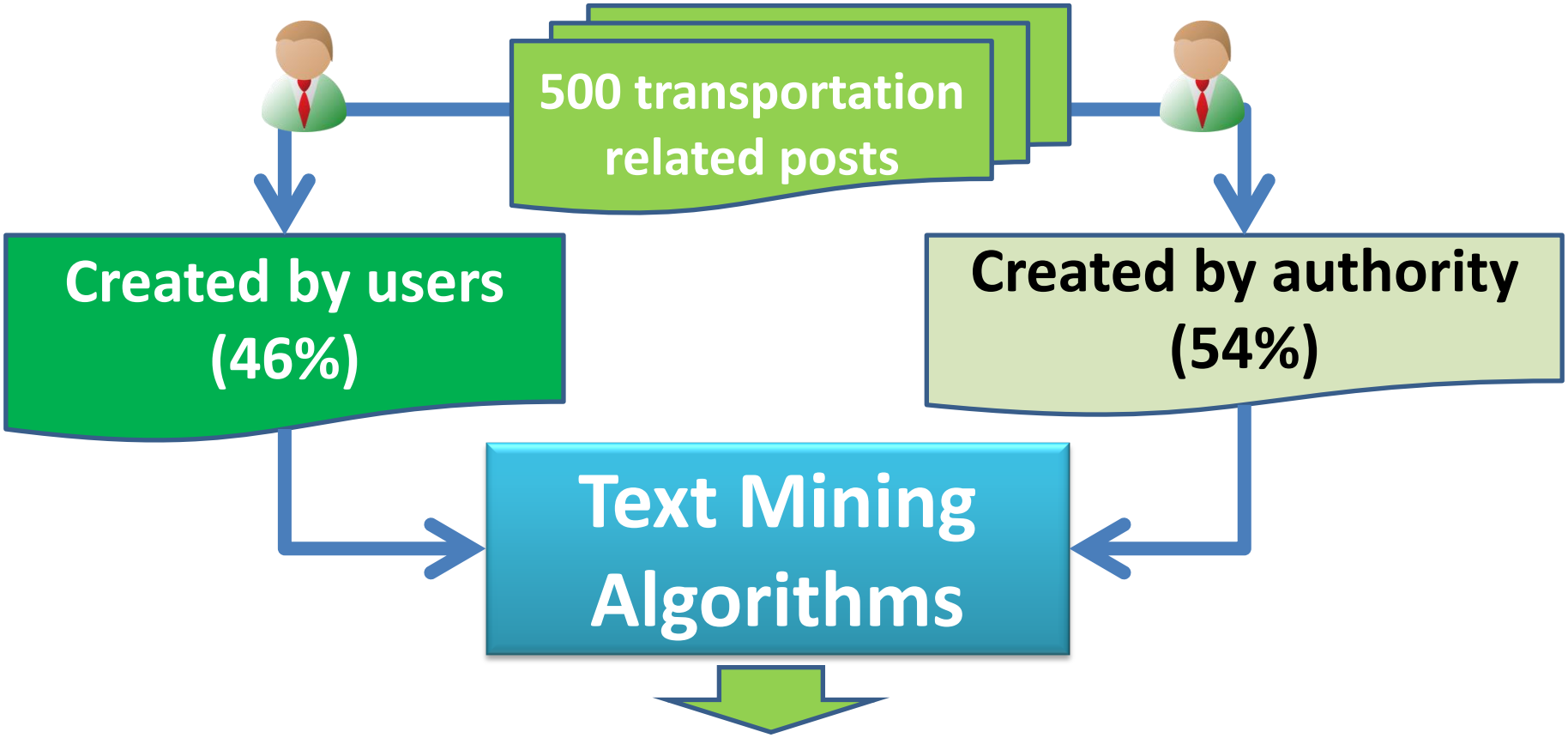
Created by users (46%)

why is there such a chronic shortage of seats on the 15.27 Peterbrough to Liverpool train?

Created by authorities (54%)

West Gate Fwy Port Melbourne - Traffic Alert Left-hand lane blocked outbound on the West Gate Bridge http://t.co/8oFcFGQh #victraffic

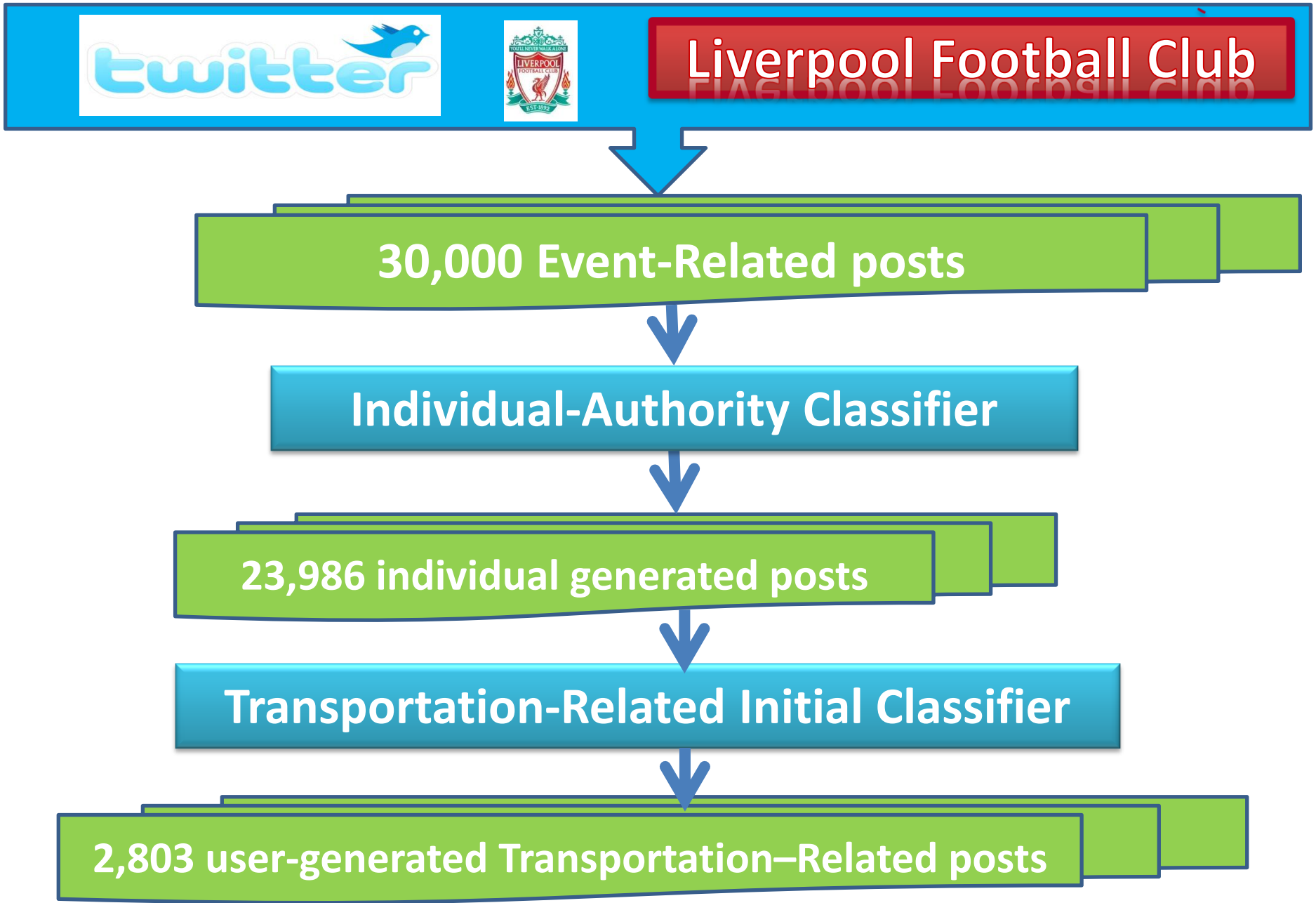
Identifying user generated posts



Classifier

If Post Includes "I"
THEN "User-Generated"
ELSE
IF Post includes "due"
THEN "Authority-Generated"…

Identifying transportation-related posts



The hypotheses

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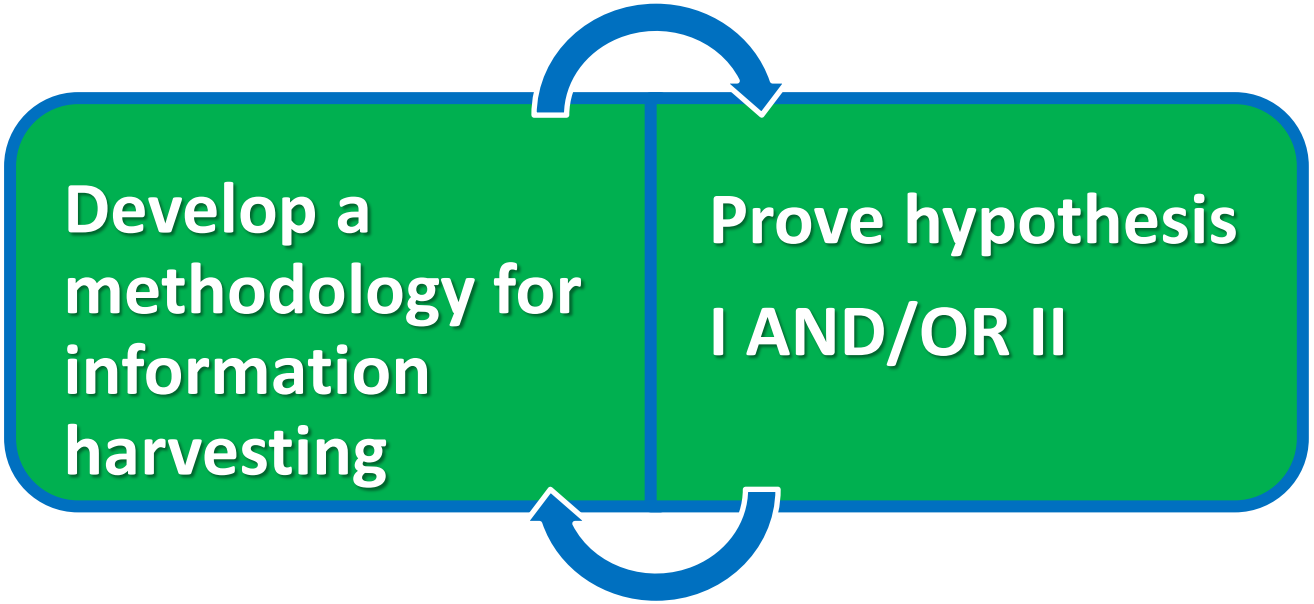

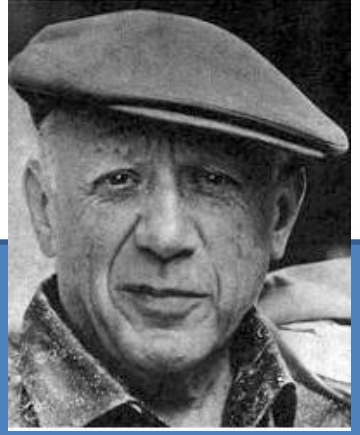

Computers are useless.
They can only give answers.

Pablo Picasso
Artist, Spain

To err is human but to really foul up requires a computer.

Dan Rather
Journalist, USA