

## Present ourselves and KEYSTONE

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- ▶ Grateful for being here
  
- 1. **U. Coimbra**, CISUC Research Center
- 2. Research in **big data, parallelism, nosql, benchmarking**

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## Roadmap

- ▶ Present ourselves and our work
  
- ▶ **Introduce you to KEYSTONE COST ACTION**

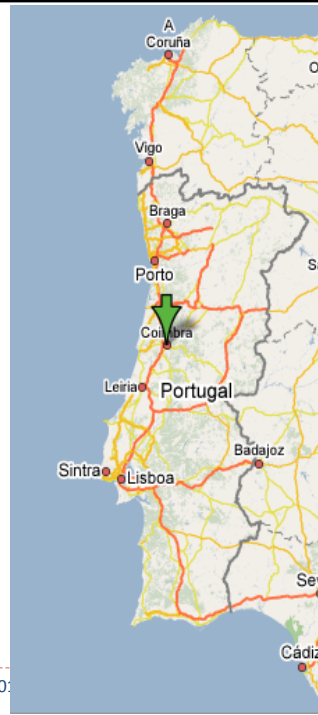
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## Coimbra

- ▶ City in the center of Portugal
  - ▶ 200 Km to the north of Lisbon
- ▶ ~ 150 000 people
- ▶ Most activity is around the University
- ▶ Many years of history



September 20



## Research

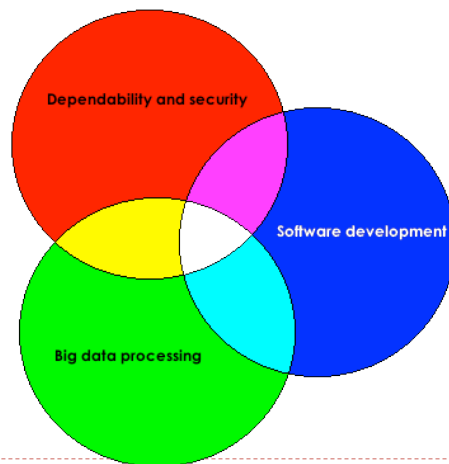
Research Group: Software and Systems Engineering

U. Coimbra

Research centre: CISUC

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## Core competences (1)



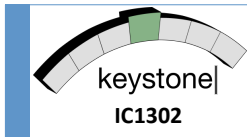
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## Core competences

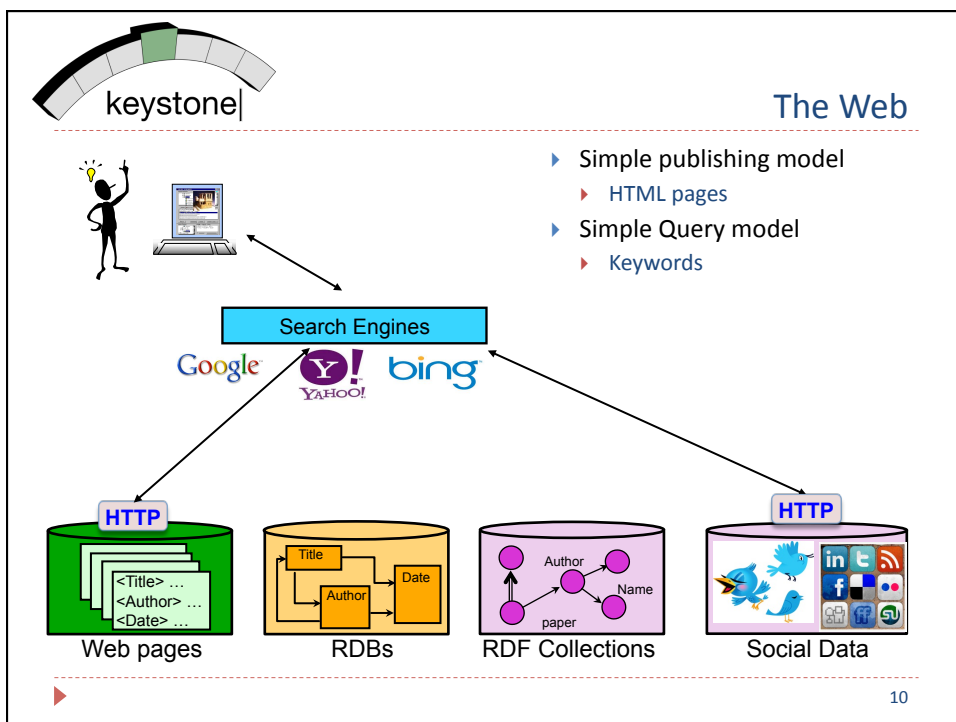
- ▶ **In the big data processing area**
  - ▶ Data Warehousing
  - ▶ Benchmarking
  - ▶ NoSQL
  - ▶ BigData processing and scalability
  - ▶ Parallel and Distributed Data Management
  - ▶ Scalability
- ▶ Cloud computing
- ▶ Complex event processing (CEP)
- ▶ Data mining



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**KEYSTONE**  
semantic keyword-based search  
on structured data sources



keystone | Structured Data Sources are left out

▶ 500 times greater than what's publicly crawlable on the Web [W08]

Search Engines  
Google Y! bing  
YAHOO!

HTTP

Web pages  
RDBs  
RDF Collections  
Social Data

[W08] Alex Wright (2008). Searching the deep web. Commun. ACM 51(10): 14-15

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keystone | Structured Sources → Structured Queries

Search Engines  
Google Y! bing  
YAHOO!

HTTP

Web pages  
RDBs  
RDF Collections  
Social Data

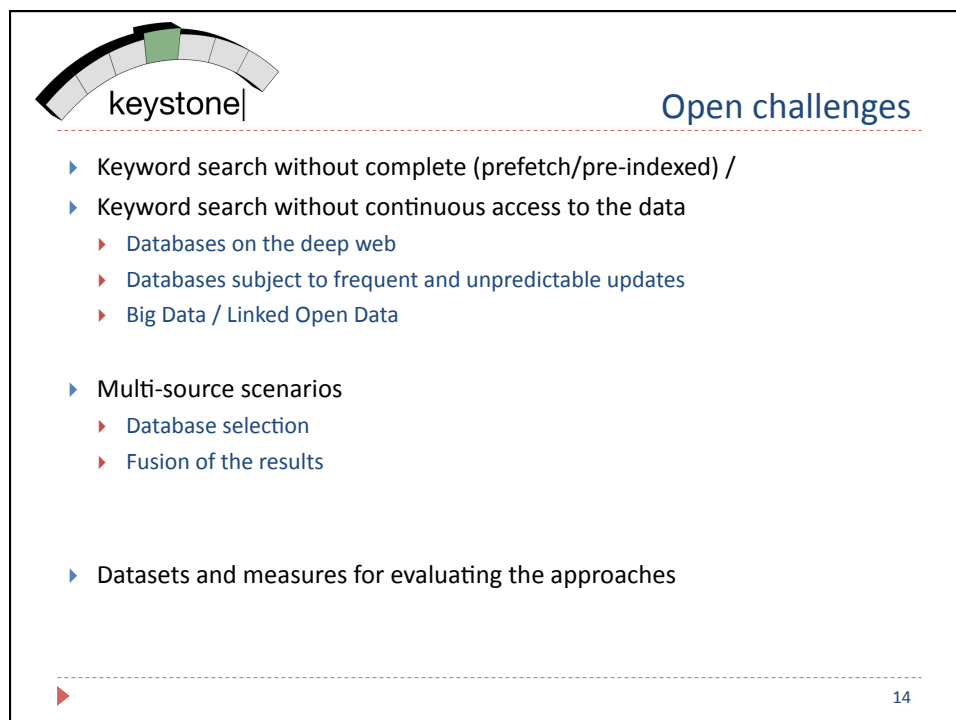
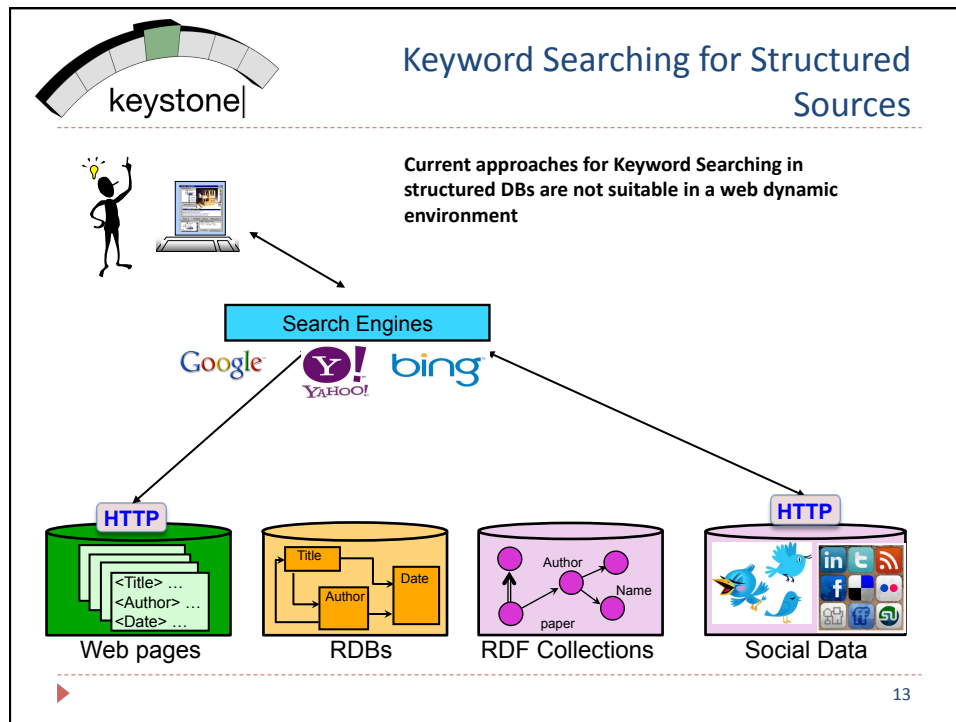
```

LET $docID := document("inputXMLfile")
RETURN
<?> [ distinct-values {
FOR $x0 IN $docID/$grant, $x1 IN $docID/$project,
    $x2 IN $docID/$contact, $x3 IN $docID/$contact
WHERE $x2/cid/text() = $x0/manager/text() AND
    $x0/supervisor/text() = $x3/cid/text() AND
    $x0/project/text() = $x1/name/text()
}
RETURN
<project>
<code> { $x0/project/text()
[ distinct-values {
[ distinct-values {
FOR $x0L1 IN $docID/$grant, $x1L1 IN $docID/$project,
    $x2L1 IN $docID/$contact, $x3L1 IN $docID/$contact
WHERE $x2L1/cid/text() = $x0L1/manager/text() AND
    $x0L1/supervisor/text() = $x3L1/cid/text() AND
    $x0L1/project/text() = $x1L1/name/text() AND
    $x0L1/project/text() = $x0L1/project/text()
}
}
RETURN
<funcdef>
<fid> { $x0L1/gid/text() } </fid>
<fnid> { "SK52", $x0L1/gid/text(), "", $x0L1/project/text(), "" }
</fnid> </funcdef>
}
}

```


Not for the casual interpereters

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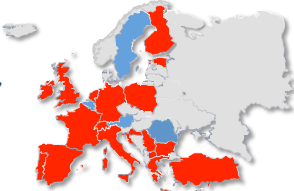






## The KEYSTONE Action

- ▶ What is COST?
  - ▶ intergovernmental framework
  - ▶ European Cooperation in Science and Technology,
  - ▶ coordination of nationally-funded research on a European level.
- ▶ What does COST fund in Keystone?
  - ▶ Activity 1: Common repository of knowledge
  - ▶ Activity 2: Working Group meetings
  - ▶ Activity 3: Open workshops
  - ▶ Activity 5: Exchanges of researchers
- ▶ Which Countries are involved?
  - ▶ See map: red countries already involved; researchers in blue countries want to participate




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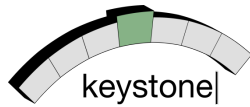


## Objectives & Drivers

1. Promote the research among European units
2. Facilitate the transfer of knowledge and technology
  1. Scientific papers, newsletters and discussion groups
  2. Meetings, training schools and academic / industrial events
3. Build a critical mass of research activities
4. Support the involvement of early stage researchers

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keystone|

## Participating in Keystone

- ▶ Finding partners for
  - ▶ Writing applications to EU calls
  - ▶ Solving keyword-search issues in particular domains
  - ▶ Discussing / Applying / Evaluating solutions
  - ▶ Supplying knowledge and technology transfer needs
  - ▶ ... and more!
  
- ▶ Interested people can
  - ▶ Visit the website <http://www.keystone-cost.eu/>
  - ▶ Send an email to [francesco.guerra@unimore.it](mailto:francesco.guerra@unimore.it)

We will also be glad to have an e-mail from you:

- ▶ Pedro Furtado: [pnf@dei.uc.pt](mailto:pnf@dei.uc.pt)
- ▶ Jorge Bernardino: [jorge@isec.pt](mailto:jorge@isec.pt)



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