A CRIS in the Desert
The Implementation of Pure at KAUST
Pure Implementation Timeline
(KAUST created in 2009)

2014
Tool study

Contract signature

Project start-up

Jan  Feb  March  April  May  June  July  Aug  Sept  Oct  Nov  Dec

2015
HR, finance, Org. Data Integration
Publication & Repository Integration
Students & Grants Integration

Jan  Feb  March  April  May  June  July  Aug  Sept  Oct  Nov  Dec

2016
ORCID, Scopus & Scival Integration
Research Portal
Go in Production
Go Live

Jan  Feb  March  April  May  June  July  Aug  Sept  Oct  Nov  Dec
KAUST in a nutshell

- 900+ Students
- 142 Faculty
- 424 Post Docs
- 234 Research scientists
- 6,000+ Publications
- 320 Invention Disclosures
- 7000 Community members
- 2231 Workforce
- 1432 School children
- 219 Patent Applications
- 104 Nationalities
- 1.95 FKAUST FWCI
Our Students

ENROLLED STUDENT FALL 2015
- 69% PhD
- 19% MS
- 12% MS/PhD

NATIONALITY BY REGION
- Saudi Arabia 30%
- MENA 18%
- Americas 8%
- Europe 9%
- Asia 17%
- China 13%
- Africa and Australia 1%
Initial plan

EXTERNAL SYSTEMS

- Publication Data Source
- Bibliometric Analysis
- Benchmarking

- SCOPUS
- WEB OF SCIENCE
- ORCID, EMBASE, PUBMED, ARXIV, SAO/NASA, CROSSREF, ESPACENET

- SCIVAL
- PLUMX, Altmetrics
- BIBEXCEL

INTERNAL SYSTEMS

- Publication Repository
- Research Highlights
- Human Resources
- Finance
- Student Administration
- Award Management

CURRENT RESEARCH INFORMATION SYSTEM

PURE

PUBLIC RESEARCH PORTAL

INTERNAL ADMIN. INTERFACE
PURE data in a nutshell

Organizations
- Offices, Divisions, Research Centers, external organizations

Persons
- Faculty, researchers, postgraduate students, external persons

Research Outputs
- Articles, proceedings, books, thesis, reports, patents

Projects
- Grants, participants, external contracts, duration, budget

Publishers-journals
- Volume, issue, page number, DOI, Open Access availability

Bibliometrics
- Citations, impact factors, indicators from Scival, WoS, Scopus and the University Repository

Activities
- Teaching, conferences, boards, learned societies, peer reviewing, etc.

Equipment
- Type, placement, ownership details, etc.

Funding opportunities
- Funder, program, amount, budget, dates, application documents

Grant applications
- Stage, funder, program, amount applied, dates, application documents

Research Outputs
- Articles, proceedings, books, thesis, reports, patents
PURE data in a nutshell

Organizations
- Offices, Divisions, Research Centers, external organizations
  - HR – Online Tools

Persons
- Faculty, researchers, postgraduate students, external persons
  - HR – Academic Affairs - Student Affairs - VPR

Research Outputs
- Articles, proceedings, books, thesis, reports, patents
  - Library

Projects
- Grants, participants, external contracts, duration, budget
  - OSR

Publishers-journals
- Volume, issue, page number, DOI, Open Access availability
  - Library

Activities
- Teaching, conferences, boards, learned societies, peer reviewing, etc.
  - Divisions - Researchers

Equipment
- type, placement, ownership details, etc.
  - Core Labs - Divisions

Funding opportunities
- funder, program, amount, budget, dates, application documents

Bibliometrics
- citations, impact factors, indicators from Scival, WoS, Scopus and the University Repository
  - Online Tools

Research Outputs
- Articles, proceedings, books, thesis, reports, patents
  - Library

Projects
- Grants, participants, external contracts, duration, budget
  - OSR

Publishers-journals
- Volume, issue, page number, DOI, Open Access availability
  - Library

Activities
- Teaching, conferences, boards, learned societies, peer reviewing, etc.
  - Divisions - Researchers

Equipment
- type, placement, ownership details, etc.
  - Core Labs - Divisions

Funding opportunities
- funder, program, amount, budget, dates, application documents

Bibliometrics
- citations, impact factors, indicators from Scival, WoS, Scopus and the University Repository
  - Online Tools

Research Outputs
- Articles, proceedings, books, thesis, reports, patents
  - Library

Projects
- Grants, participants, external contracts, duration, budget
  - OSR

Publishers-journals
- Volume, issue, page number, DOI, Open Access availability
  - Library

Activities
- Teaching, conferences, boards, learned societies, peer reviewing, etc.
  - Divisions - Researchers

Equipment
- type, placement, ownership details, etc.
  - Core Labs - Divisions

Funding opportunities
- funder, program, amount, budget, dates, application documents

Bibliometrics
- citations, impact factors, indicators from Scival, WoS, Scopus and the University Repository
  - Online Tools

Research Outputs
- Articles, proceedings, books, thesis, reports, patents
  - Library

Projects
- Grants, participants, external contracts, duration, budget
  - OSR

Publishers-journals
- Volume, issue, page number, DOI, Open Access availability
  - Library
PURE data in a nutshell

Organizations
- Offices, Divisions, Research Centers, external organizations
- HR – Online Tools
- HR – Academic Affairs - Student Affairs - VPR

Persons
- Faculty, researchers, postgraduate students, external persons
- Library

Research Outputs
- Articles, proceedings, books, thesis, reports, patents

Projects
- Grants, participants, external contracts, duration, budget
- OSR

Bibliometrics
- Citations, impact factors, indicators from Scival, WoS, Scopus and the University Repository
- Online Tools

Publishers - Journals
- Volume, issue, page number, DOI, Open Access availability
- Library

Activities
- Teaching, conferences, boards, etc.
- Core Labs - Divisions

Equipment
- Type, placement, ownership details, etc.

Funding Opportunities
- Funder, program, amount, budget, dates, application documents

Projects
- Grants, participants, external contracts, duration, budget

Systems already in place

Need extra staffing to gather data

Grant applications
- Stage, funder, program, amount applied, dates, application documents

Internal Funding Agency

>5,000
Org
>90
>9,000
Ext
>3,000
Int
>10,000
Ext
>5,000
>400
>4,000
>130
Pub
>1,200
Jour
>10,000
Org
>9,000
Ext
>3,000
Int
>120
Pub
>130
Jour
>1,200
Pub
Current arrangement

- Research Highlights (Discovery)
- Pure Research Portal
- Metrics Portal (PlumX)
- CRIS (PURE)
- Institutional Repository
- Synchronization Database
- Scopus/Scival Web of Science
- ORCID Integration
- Publication Tracking

Legend:
- Internal Tool
- Public-facing Tool
- Manual integration
Internal dashboard
KAUST Collaborations

<table>
<thead>
<tr>
<th>Institution</th>
<th>Co-authored publications</th>
<th>Co-authors outside KAUST</th>
<th>Co-authors at KAUST</th>
<th>Citations</th>
<th>Views</th>
<th>Citations per Publication</th>
<th>Field-Weighted Citation Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>King Fahd University of Petroleum and Minerals</td>
<td>116</td>
<td>100</td>
<td>75</td>
<td>413</td>
<td>5154</td>
<td>3.8</td>
<td>1.38</td>
</tr>
<tr>
<td>King Abdulaziz University</td>
<td>44</td>
<td>52</td>
<td>66</td>
<td>449</td>
<td>4177</td>
<td>10.2</td>
<td>2.24</td>
</tr>
<tr>
<td>King Saud University</td>
<td>33</td>
<td>33</td>
<td>20</td>
<td>182</td>
<td>1700</td>
<td>5.5</td>
<td>1.44</td>
</tr>
<tr>
<td>King Abdulaziz City for Science and Technology</td>
<td>22</td>
<td>11</td>
<td>32</td>
<td>105</td>
<td>1295</td>
<td>4.8</td>
<td>0.96</td>
</tr>
<tr>
<td>Saudi Aramco</td>
<td>16</td>
<td>20</td>
<td>27</td>
<td>18</td>
<td>1420</td>
<td>1.1</td>
<td>0.59</td>
</tr>
<tr>
<td>Alfaisal University</td>
<td>14</td>
<td>4</td>
<td>5</td>
<td>78</td>
<td>1459</td>
<td>5.6</td>
<td>1.16</td>
</tr>
<tr>
<td>Taibah University</td>
<td>7</td>
<td>15</td>
<td>11</td>
<td>45</td>
<td>509</td>
<td>6.4</td>
<td>2.01</td>
</tr>
<tr>
<td>Umm Al Qura University</td>
<td>6</td>
<td>8</td>
<td>12</td>
<td>16</td>
<td>428</td>
<td>2.7</td>
<td>0.66</td>
</tr>
<tr>
<td>Princewase Nouraib bin Abdulrahman University</td>
<td>4</td>
<td>8</td>
<td>5</td>
<td>8</td>
<td>64</td>
<td>2</td>
<td>1.2</td>
</tr>
<tr>
<td>Al-IImam Muhammad ibn Saud Islamic University</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>40</td>
<td>120</td>
<td>24.5</td>
<td>3.58</td>
</tr>
<tr>
<td>King Khalid University</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>253</td>
<td>0.5</td>
<td>0.08</td>
</tr>
<tr>
<td>University of Dammam</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>102</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>King Faisal University</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>26</td>
<td>3</td>
<td>2.62</td>
</tr>
<tr>
<td>Taif University</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>94</td>
<td>3</td>
<td>0.72</td>
</tr>
<tr>
<td>Qassim University</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>3</td>
<td>0.72</td>
</tr>
</tbody>
</table>
Examples of reports

KAUST Division Projects Analysis

A report made in Pure. Prepared by: (changeme@atira.dk), 3/05/16 15:31

Organizational unit

<table>
<thead>
<tr>
<th>KAUST Division Projects Analysis</th>
<th></th>
</tr>
</thead>
</table>

### Matrix of collaboration

<table>
<thead>
<tr>
<th>KAUST Division Projects Analysis</th>
<th></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Organization</th>
<th>Participants</th>
<th>Collaborations</th>
</tr>
</thead>
<tbody>
<tr>
<td>KAUST Division Projects Analysis</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of Projects</th>
<th>Internal Collaboration</th>
<th>External Collaboration</th>
<th>Total Collaboration</th>
</tr>
</thead>
<tbody>
<tr>
<td>219</td>
<td>58</td>
<td>74</td>
<td>34350</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Average (AV)</th>
<th>2.29</th>
</tr>
</thead>
</table>

### Matrix of collaboration

<table>
<thead>
<tr>
<th>KAUST Division Projects Analysis</th>
<th></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>University</th>
<th>Participants</th>
<th>Collaborations</th>
</tr>
</thead>
<tbody>
<tr>
<td>KAUST Division Projects Analysis</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Average (AV)</th>
<th>2.08</th>
</tr>
</thead>
</table>

Reports can be exported to doc, xls, pdf, html
Identifying Networks + Conflict of interest
Ideal model

- Person Information
- Institutional Reporting
- Publications Tracking
- Metrics Analysis
- Validated Info
- Researcher Identity and Profiling
- Funding Information
- Preservation and Access
- Impact Tracking

- Data sources in customized formats
- Data integration and validation
- Data storage in CERIF format
- Optimal and flexible system using standard metadata
Global environment

• Identification systems
  – For organizations, funding, facilities
  – Open and widely implemented

• Interchange standards
  – CERIF APIs – global adoption?
  – Support by systems vendors for modularity
### Institutional challenges

- Access to information + standardization
- Big Brother is watching you (for researchers)
- Difficulty to adapt Pure to local needs
- Adapted to EU-US context
- Affiliation problems
- New indicators

**One can grow a CRIS in the desert!**
Thank You!

T.LERY@KAUST.EDU.SA