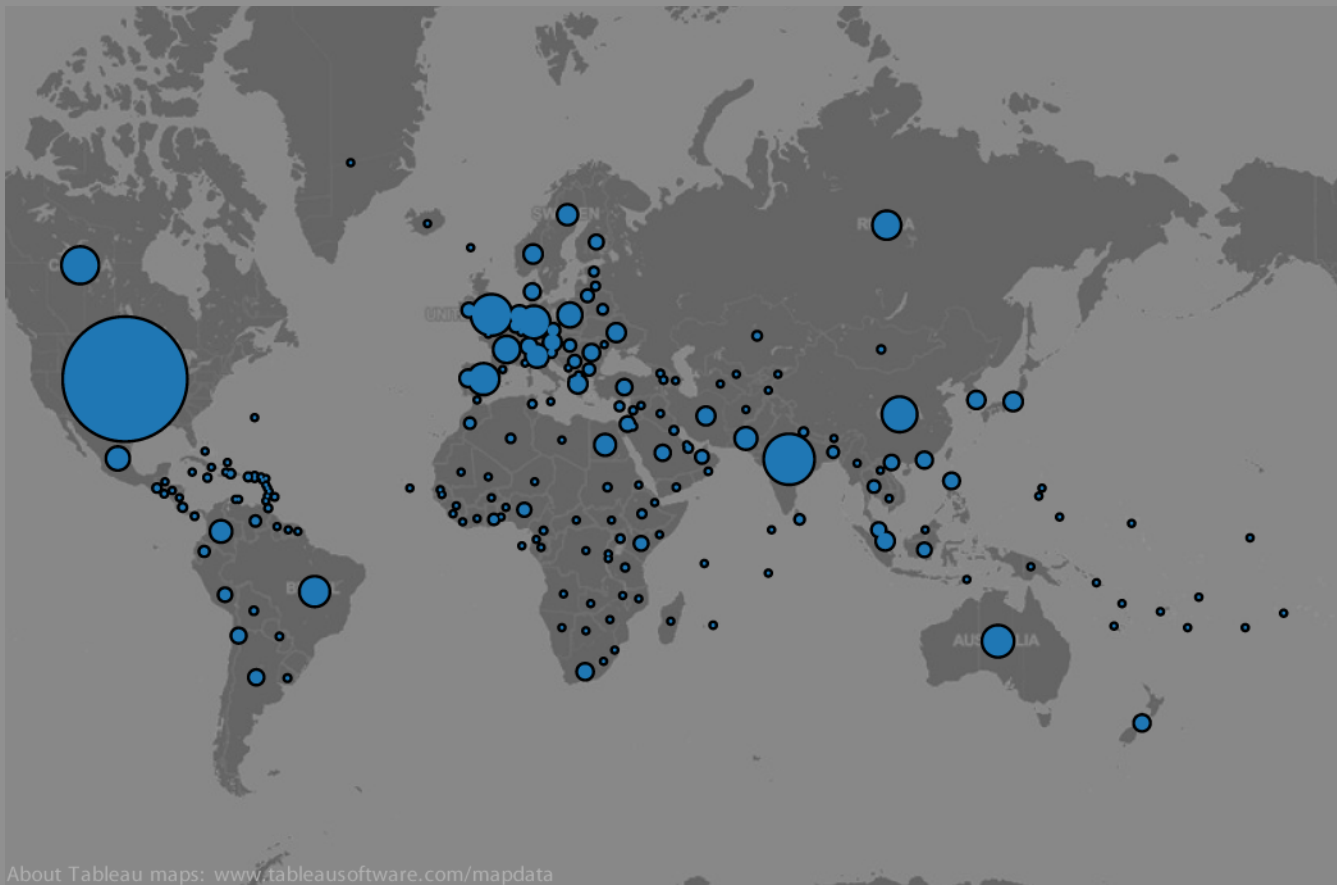


Let There be Data

Andreas Paepcke
Stanford University

MOOCs

- No barrier to enrollment
- Accessible worldwide



Consequence:

Scale
Diversity

Challenges

Scale

Diversity

- Assessment beyond multiple choice
 - Humanities
 - Show your work
 - Proper peer grading
- No lecture hall pulse
- No office hours

Challenges

Scale
Diversity

- Prior education
- Age
- Language
- ...
- **Intent**

Challenges

Scale Diversity

- Prior education
- Age
- Language
- ...
- **Intent**
 - Deep dive
 - Brush up
 - Learn one part
 - Is this a career?
 - Do half, then vacation

What's Needed?

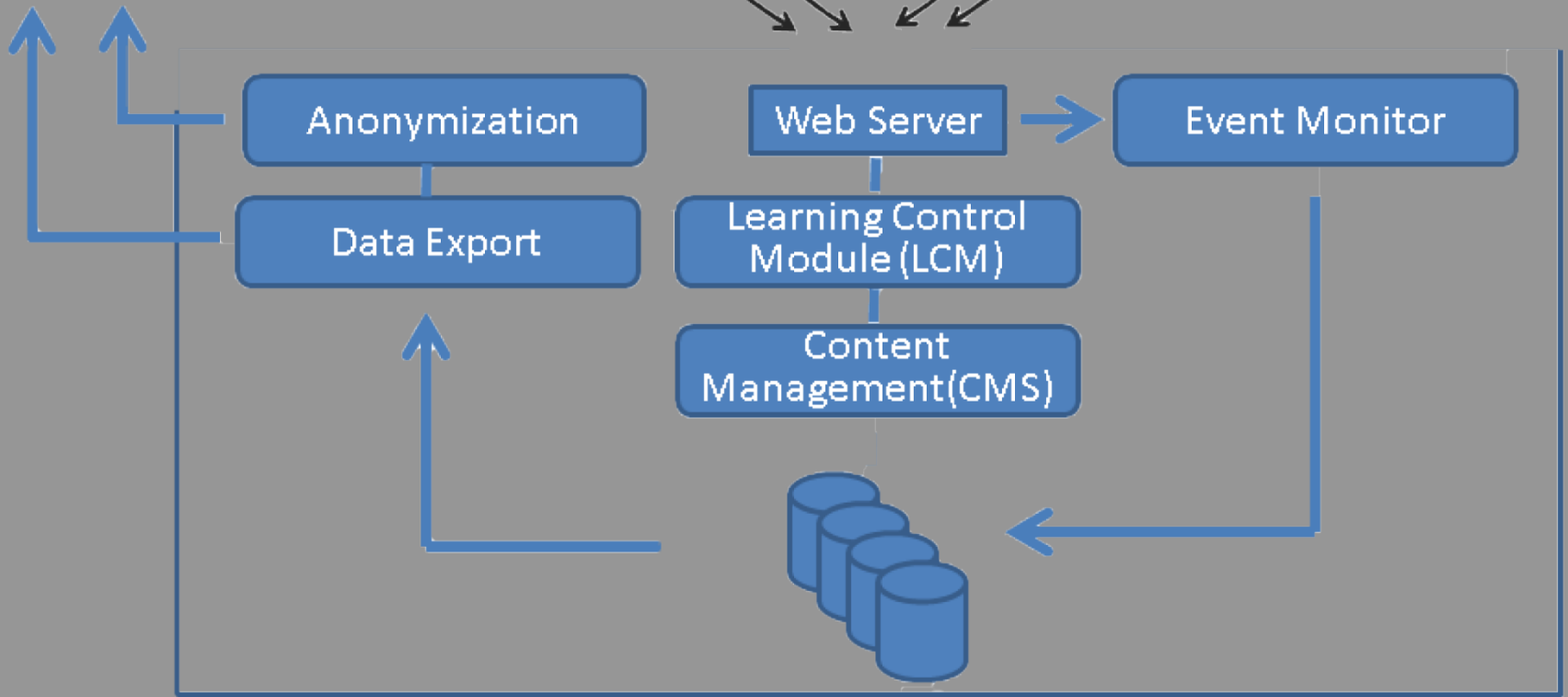
- Instructional designer
- Student demographics
 - Past difficulties
 - Nav paths taken

- Instructor
- Bad video sections
 - Excessive time investment
 - Confusion on forum
 - Peer review selection

- Learning researcher
- How are videos used?
 - Time spent
 - Comprehension: all granularities
 - Hints of intent
 - Comparison of multiple runs
 - Controlled intervention



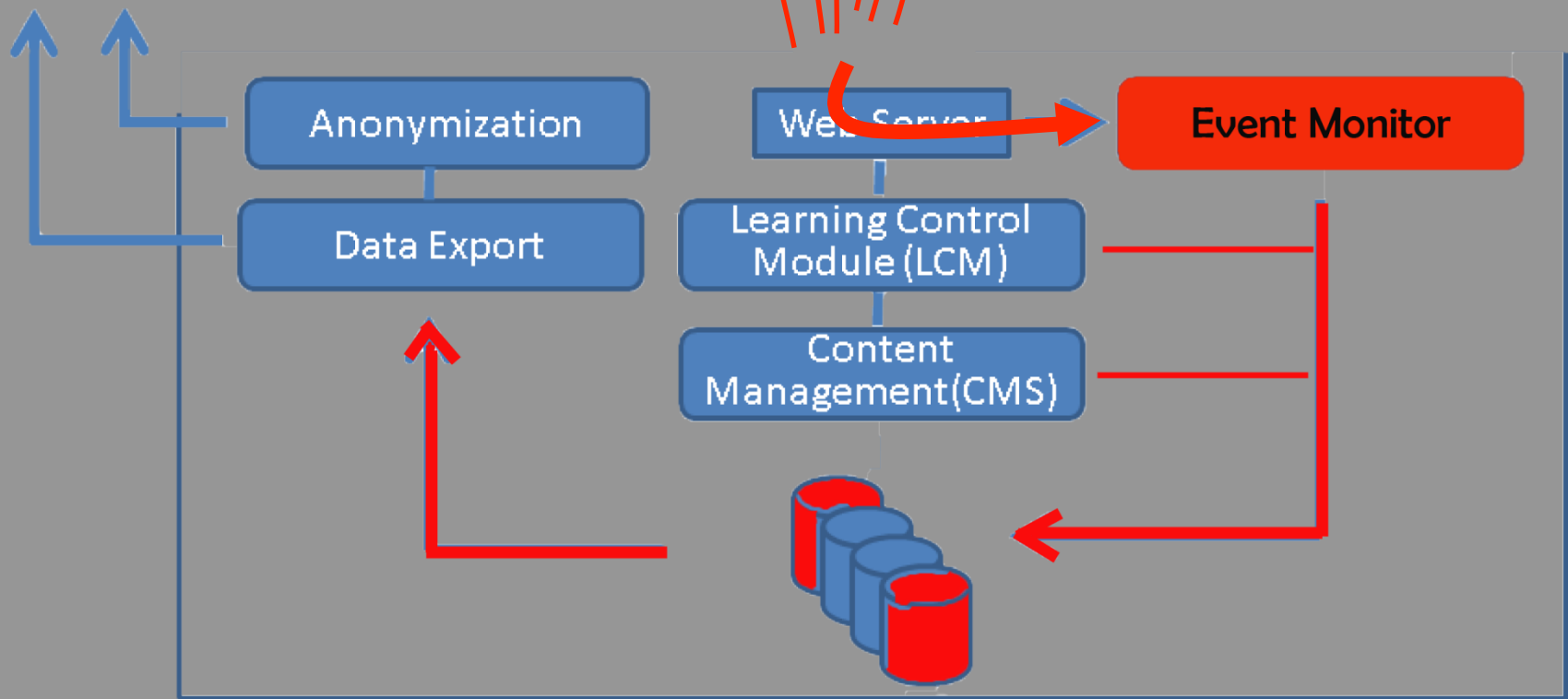
Research
Course Operations





- Video interactions
- Assignment submission
- Navigation

Research
Course Operations



This is not Enough

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Desiderata

Data must be:

- Of a model understood by most
- Loadable with standard tools
- Fine grained
- Cross linkable
- Real-time
- Anonymizable

Available not just to a few providers