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Beyond the hype: The hard work behind analytics success

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Disclaimer

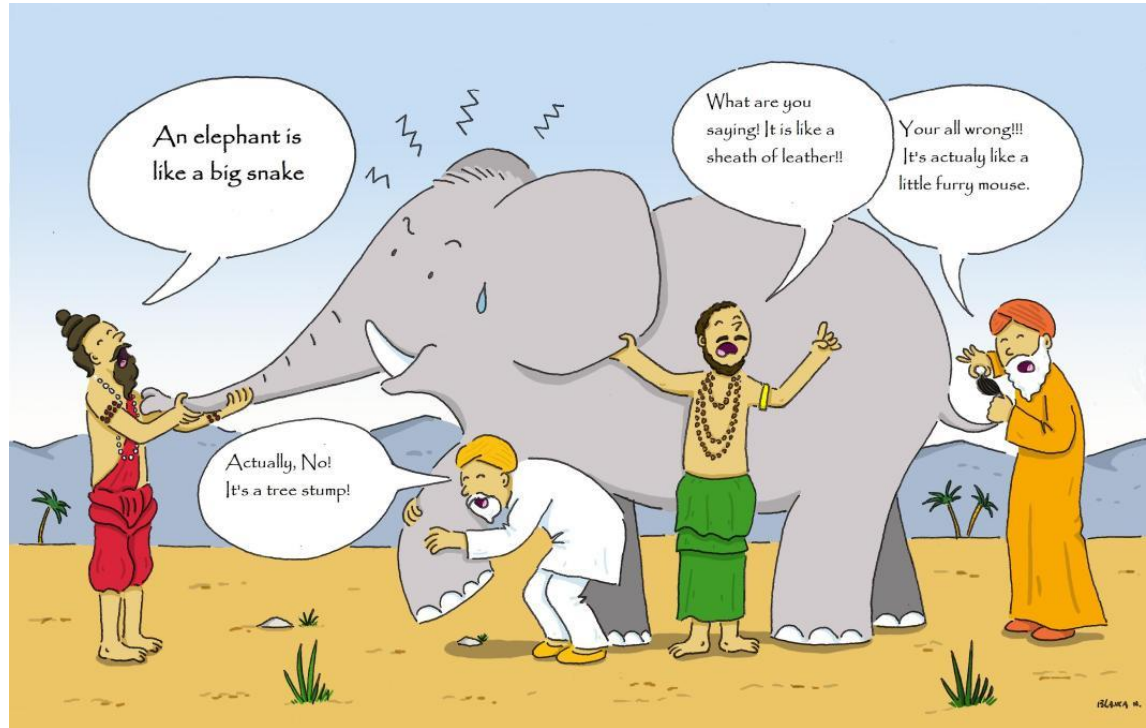
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What is analytics?



Source: <https://wildequus.org/2014/05/07/sufi-story-blind-men-elephant/>



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Success factors

The will

We want to do analytics



Source: fotolia.com

We want to do analytics



Source: fotolia.com



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We should do more of it



Source: fotolia.com



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An enterprise function

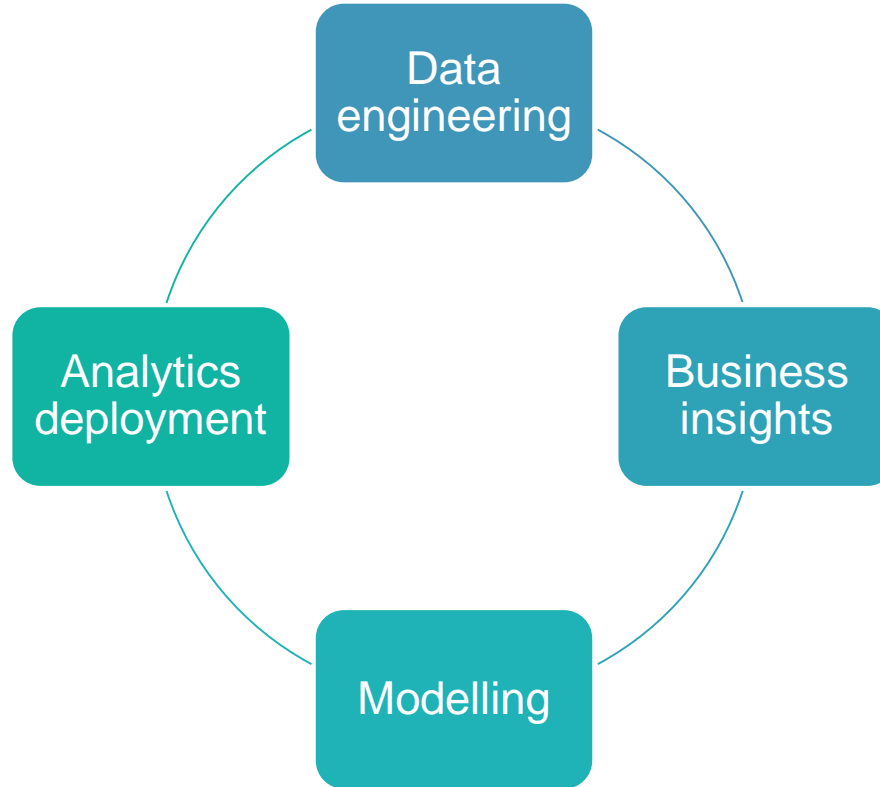


Source: fotolia.com



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An enterprise function



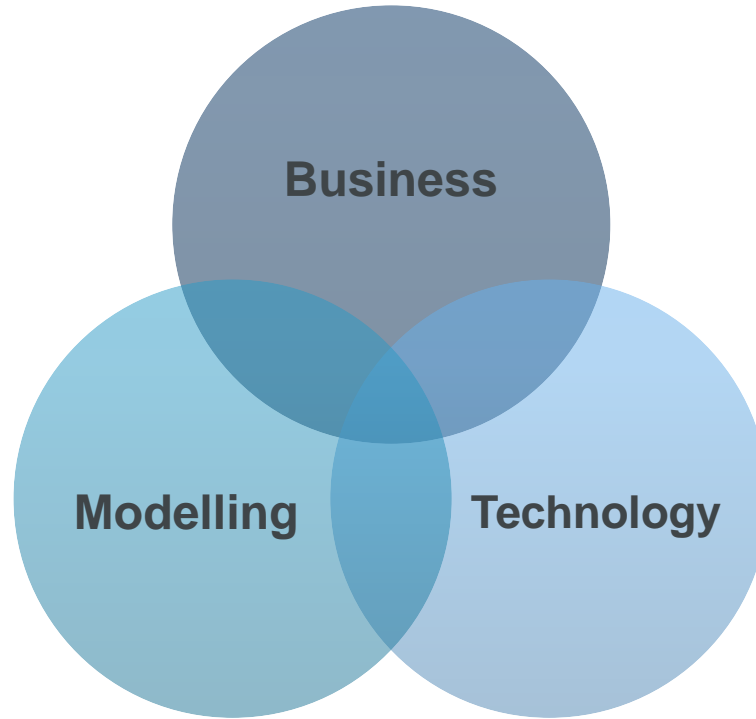


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Success factors

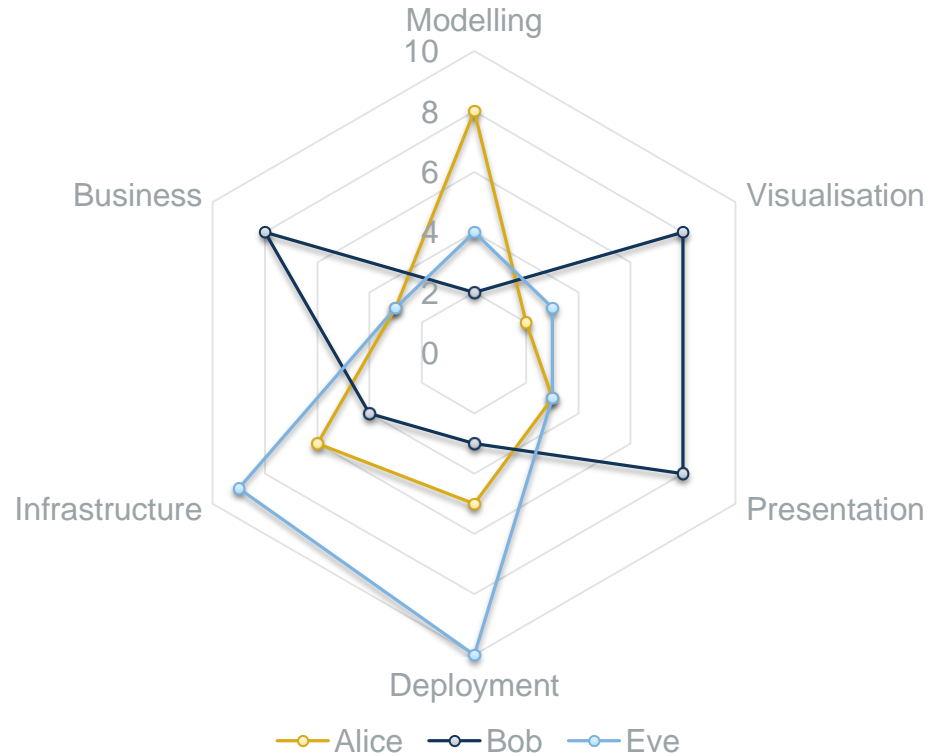
The skill

Seeking the gems



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What you need



Recruiting

- The environment
 - Acquiring top people is always hard
 - “Hot market”
 - What are analysts looking for?
- Understand
 - What is a data scientist?
 - What do you need?
- What's worked for us
 - Be active in the local analytics community
 - Case studies
 - Recruit with an absolute bar in mind





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Success factors

The data

Do you have the data you need?

- Quantity
 - Interested in rare events
 - Exclude 20 – 30 percent for testing
 - Split by multiple factors
- Quality
 - Granularity
 - Consistency across sources and over time
 - Data errors and missing values
- Structure
 - Common identifiers
 - Semi- or unstructured
 - Rectangular or more complex



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Can you use the data you have?

- Relevance
- Rights to use
- Future availability



Source: <http://i.imgur.com/Pm1yR.png>



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Success factors

The tech

Modelling and analysis

- Handle Gigabytes of data
- Access models and techniques
 - Actuarial
 - Statistical
 - Machine learning



Reproducibility

- Scripted data manipulation and analysis
- Source control
- Controlled environment



Collaboration

- Centralized infrastructure



- Project management and issue tracking



- Mutual learning

- Seminars
- Code reviews
- Discussion forum



Delivery

- Presentations
- Reports or report templates
- Tools
- Interactive dashboards



Big data – it's relative

- High data volumes
- High speed
- Data pipelines



Hadley Wickham ✓
@hadleywickham

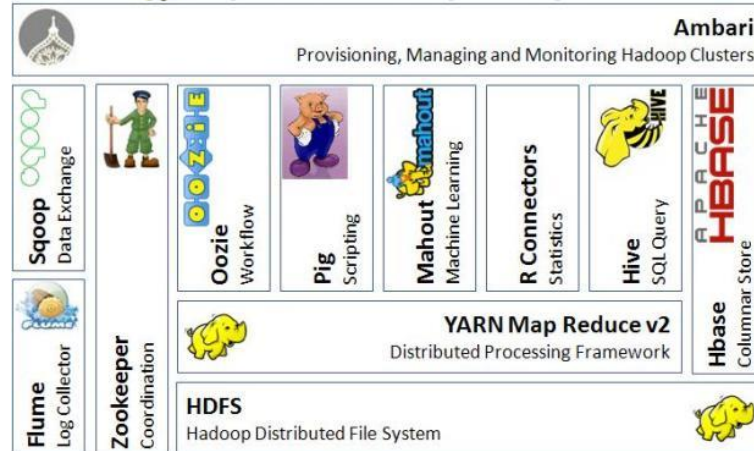
Follow

"It takes a big man to admit his data is small"
— @jcheng

12:01 PM - 23 Feb 2015



Apache Hadoop Ecosystem



Source: <http://quantfarm.com> via <http://blog.agroknow.com/?p=3810>



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Big data – it's relative



Source: https://twitter.com/randal_olson/status/927157485240311808



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Flexibility and scalability

- Free and open-source software
(e.g., *GNU General Public License*)



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How we work

Types of analytics projects

Once-off analysis

- Integrated development environment
- Source control (local)
- Collaborative facilities
- Reproducible analysis



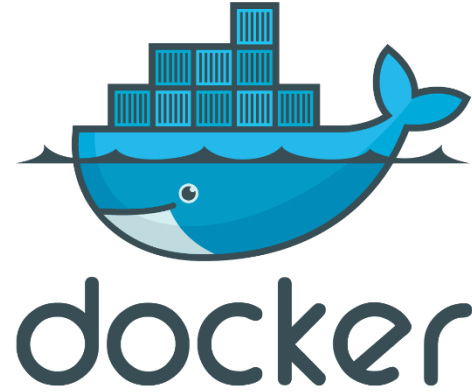
Ongoing projects

- Centralized source control
- Issue tracking
- Project management
- Automated testing
- Documentation



Deployed infrastructure

- High availability
- Long-run stability





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Wrap Up

24 November 2017

Success factors

WILL – Buy-in from stakeholders

Pilot projects require top analytics **SKILL**

No analytics without the right **DATA**

TECHNOLOGY – Start small, keep flexible



Success factors

WILL – Buy-in

Pilot projects

No analytics v

TECHNOLOG



Source: fotolia.com



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Questions

Comments

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