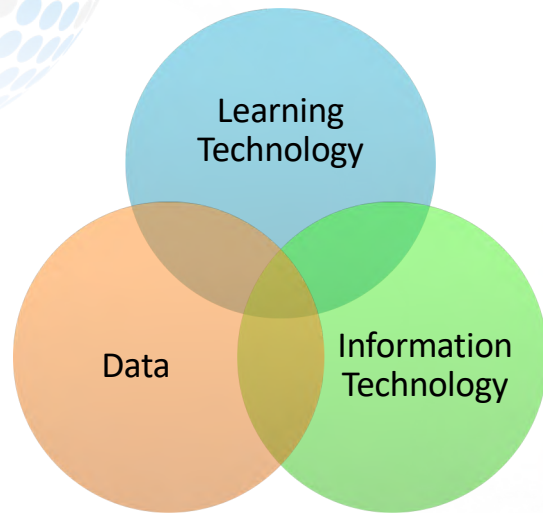


Using Data and Developing Data Systems in International Schools

EARCOS 2018



Matt Harris, Ed.D.

International Educational Consultant, *International EdTech*

matt@internationaledtech.com

Download today's presentation
<http://edtch.co/EARCOS18UsingData>



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My Background

- International EdTech consultant
 - Leadership consultation,
 - EdTech planning and evaluation
 - Digital Citizenship
 - Training<http://internationaledtech.com>
- Consulted with schools, MOEs, and companies on EdTech topics
- Worked as Tech Director for 15+ years
- Led Data Systems team for new school in Saudi Arabia
- Worked with American, IB, British, and German curricula
- Former Chair of the ISTE Board
- Blogger, Vlogger, Presenter on EdTech
<http://mattharrisedd.com>
- Twitter: [@mattharrisedd](https://twitter.com/mattharrisedd)
- Current Project:
Blueprint for Technology in Education

26 October 2018

“We help all schools use technology successfully.”

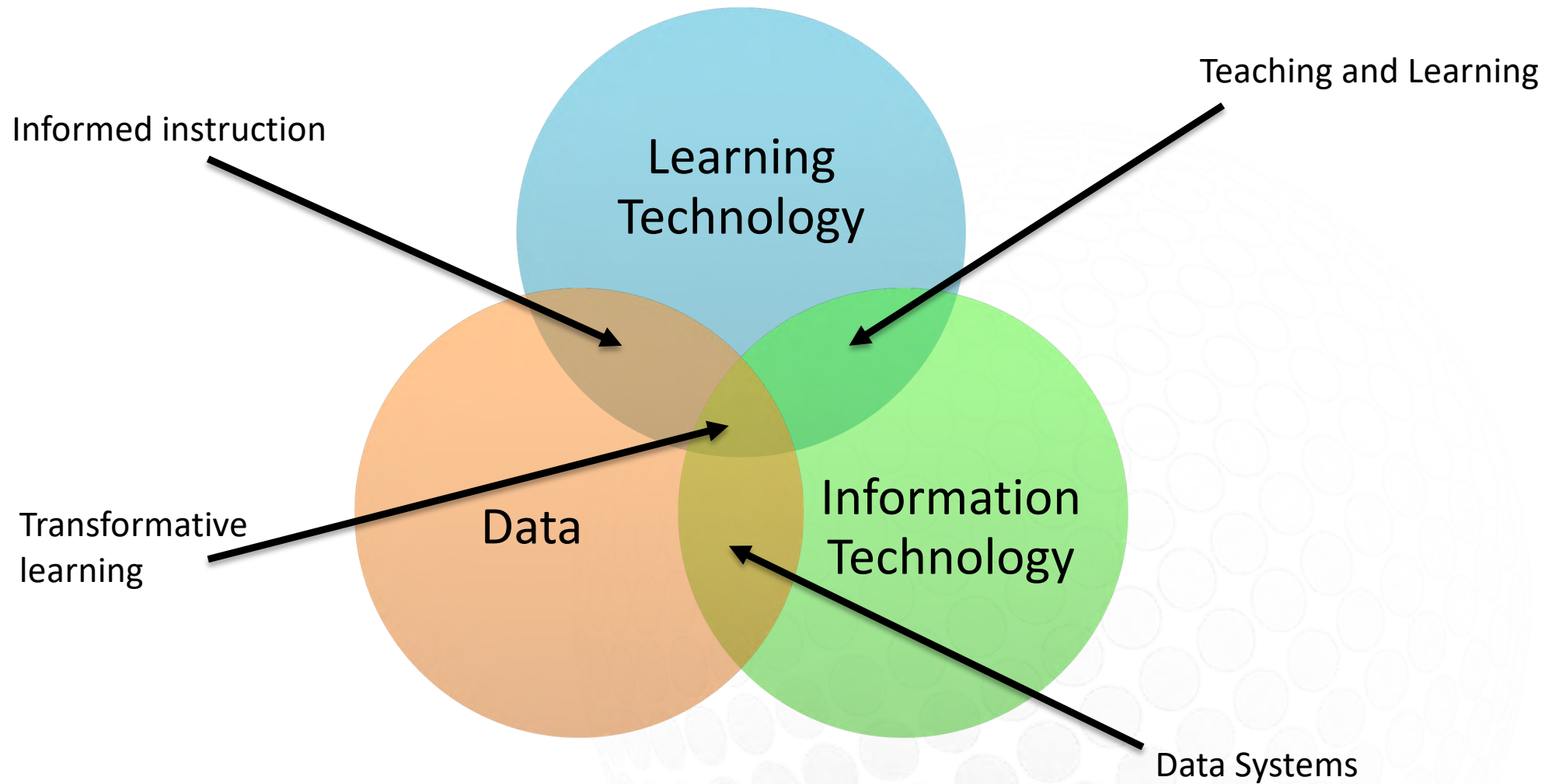
“Information is the oil of the 21st century, and analytics is the combustion engine.”

[Peter Sondergaard](#)

Elements of Technology in School

- Learning Technology
 - Technology for teaching and learning
 - Pedagogic based
 - Focus on teaching and learning
- Information Technology
 - Infrastructure
 - Devices
 - Networking
 - Resources
- Data





“Too often we forget that genius, too, depends upon the data within its reach, that even Archimedes could not have devised Edison’s inventions.”

[Ernest Dimnet](#)

Data is at the center of what we do in schools

Data based decision making

or **data** driven **decision making** refers to educator's ongoing process of collecting and analyzing different types of **data**, including demographic, student achievement test, satisfaction, process **data** to guide **decisions** towards improvement of educational process.

- https://en.wikipedia.org/wiki/Data_based_decision_making

Unleash the Power of Data

1. Get a big picture view of the organization
 2. Follow more than your customers
 3. Unify your departments under one umbrella
 4. Use data to develop
- <https://www.entrepreneur.com/article/245493>

What types of data do we have as international schools?

- Student academic performance data
 - Summative
 - Formative
 - Cumulative
- Student non-academic data
 - Behavior
 - PHSE
 - Health
 - Matriculation
 - Sports
 - Etc.
- Admissions data
- Alumni data
- Current parents
- Financial data
- Marketing data
- Recruiting data
- Human Resources data
- Transportation data
- Food services data
- External vendor data

THIS BEGS THE QUESTION:

DO YOU KNOW AND HANDLE YOUR DATA WELL?

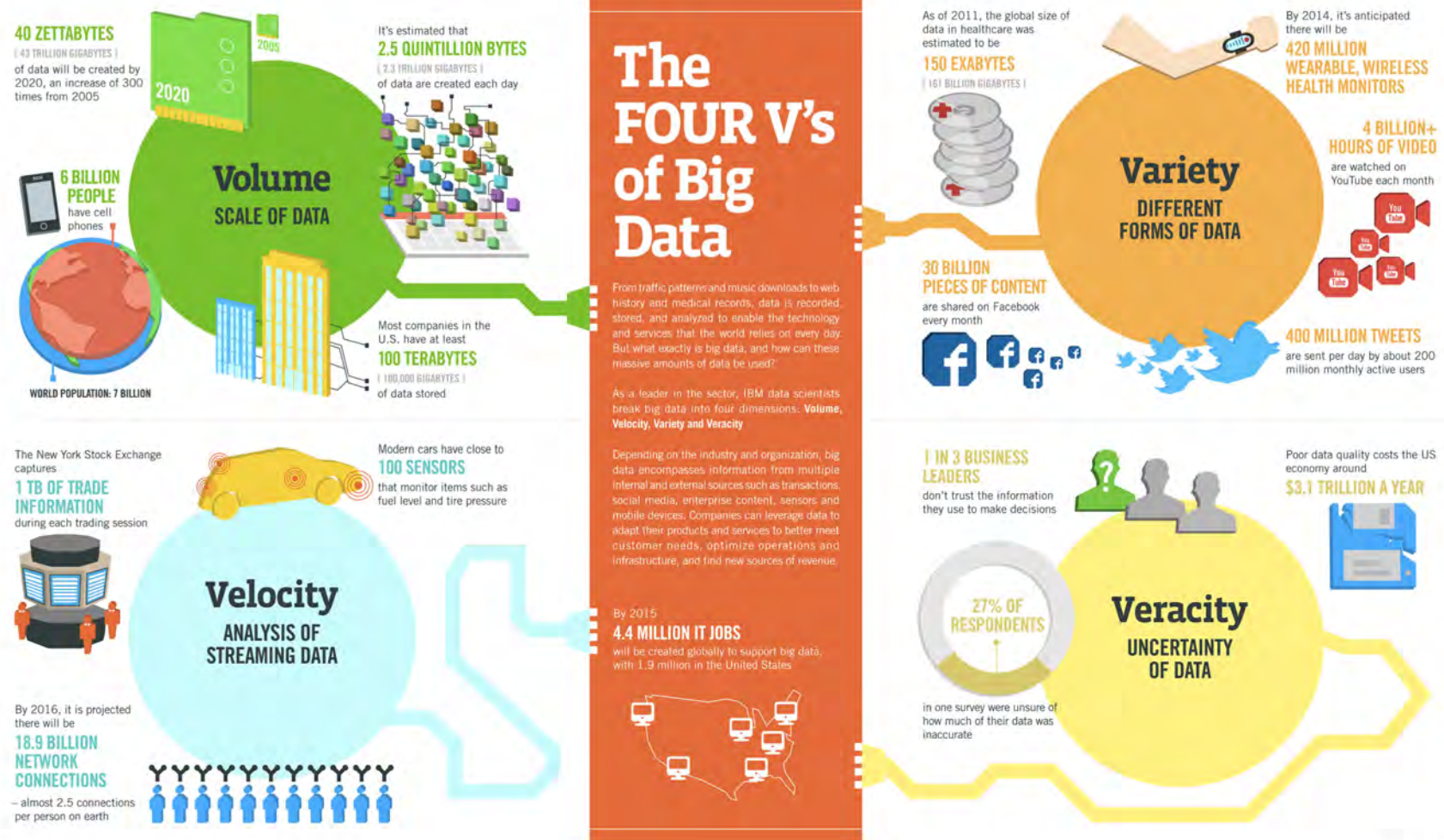
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“Without big data analytics, companies are blind and deaf, wandering out onto the Web like deer on a freeway.”

[Geoffrey Moore](#)





Sources: McKinsey Global Institute, Twitter, Cisco, Gartner, EMC, SAS, IBM, MEPTec, GAS

IBM

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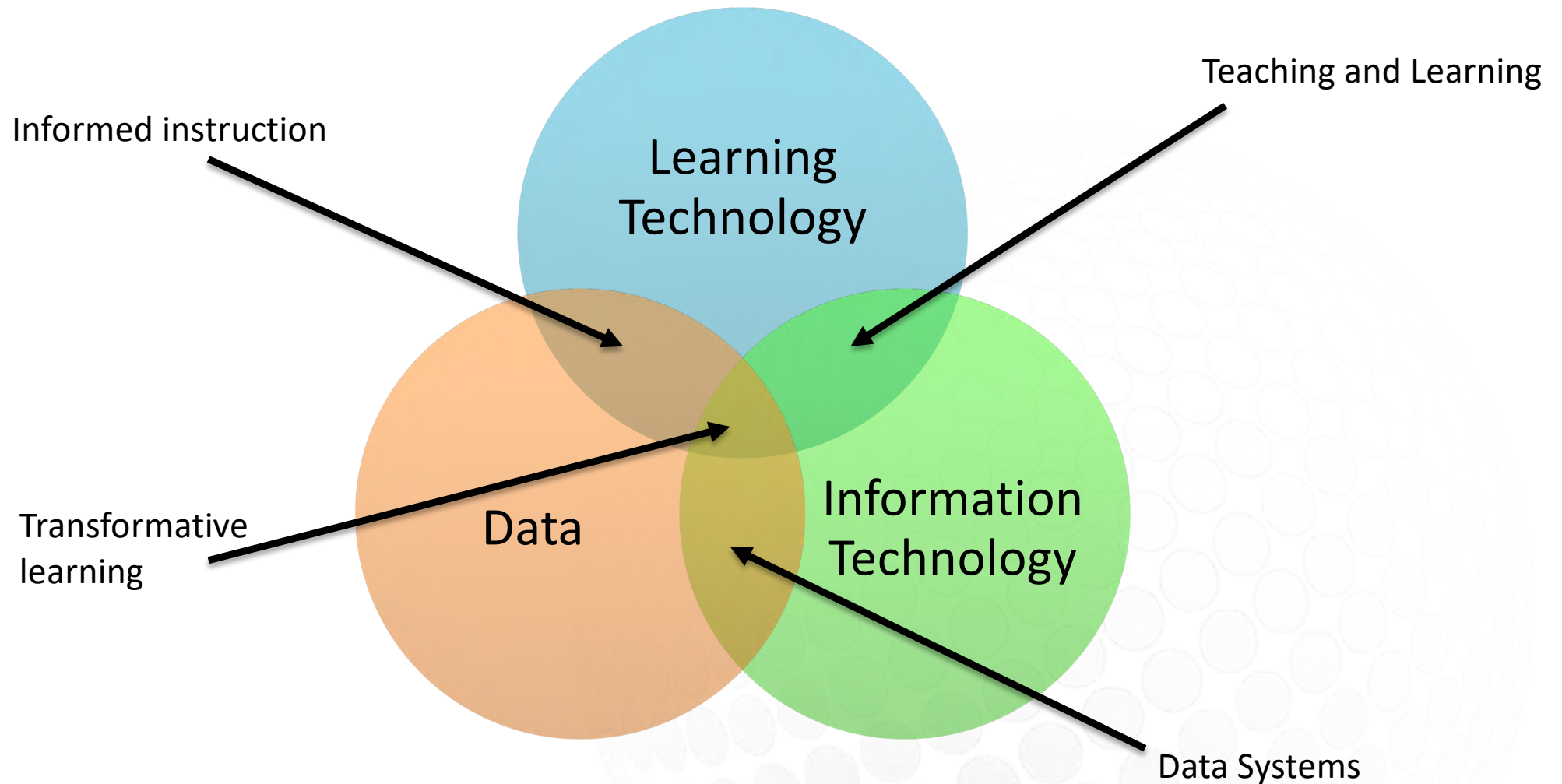
“It is a capital mistake to theorize before one has data.”
Sherlock Holmes, “A Study in Scarlett” (Arthur Conan Doyle).

But let's not get ahead of ourselves...

...the most important exercise a school can undertake is to organize its

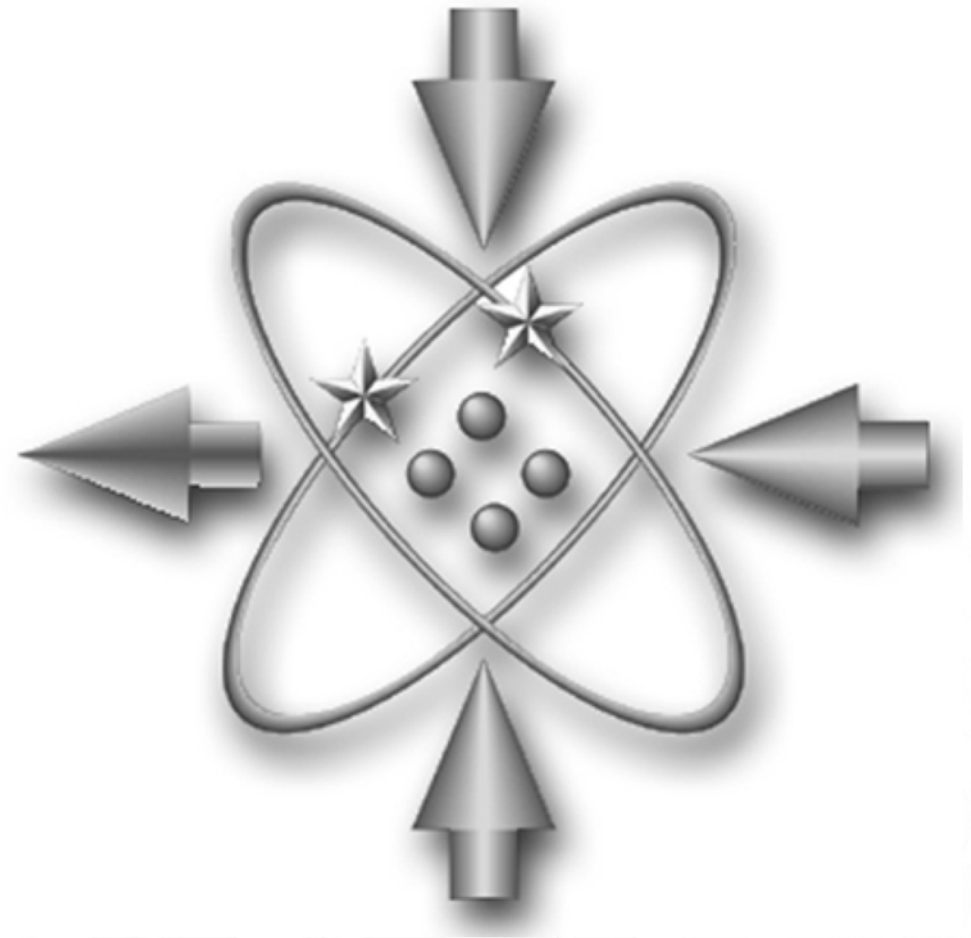
OPERATIONAL DATA SYSTEMS

These are the data systems where schools store and access their key operational and academic data.



Examples of Key Data Systems

- Student Information System
- Learning Management System
- Admissions System
- Finances/Accounting System
- Content Management System
- Human Resources Management System
- Library Management System
- Bus/Transport Management
- University Counselling System
- Point of Sale System



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“He uses statistics as a drunken man uses lamp posts – for support rather than for illumination.”

Andrew Lang, Scottish Writer

The largest operational challenge in international schools:

Non-aligned data systems

The data systems separate departments and make school operations increasingly complex.

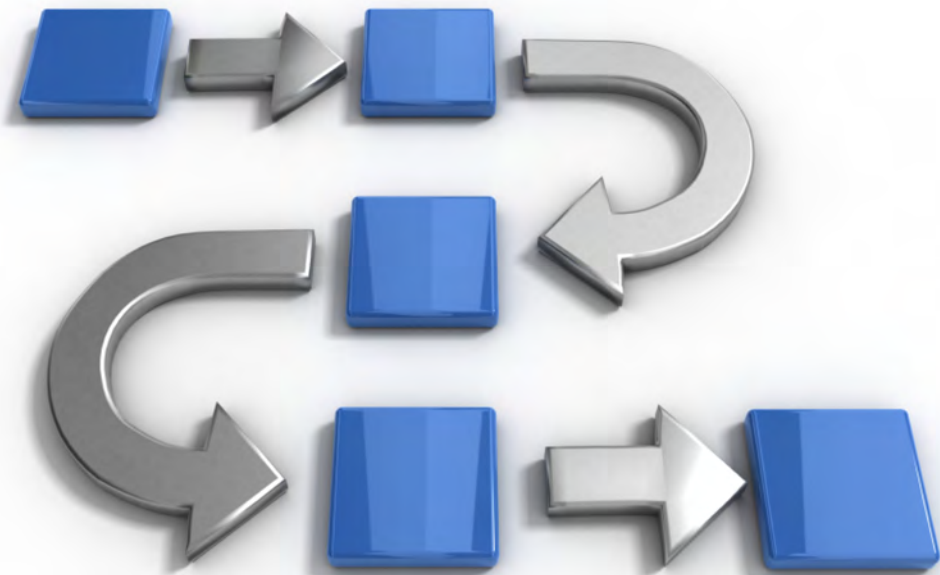
Workflows and Data Alignment – Singing from same hymnal



- **Hymnal** – Aligned data systems in the school
- **Hymn Sheet** – A single data system
- **Singers** – Teachers and staff members
- **Hymn** - Workflow

Example of workflow - A new student

1. Parent inquires
2. Communication
3. Application
4. Assessment
5. Acceptance
6. Enrollment
7. Scheduling
8. Participation in learning

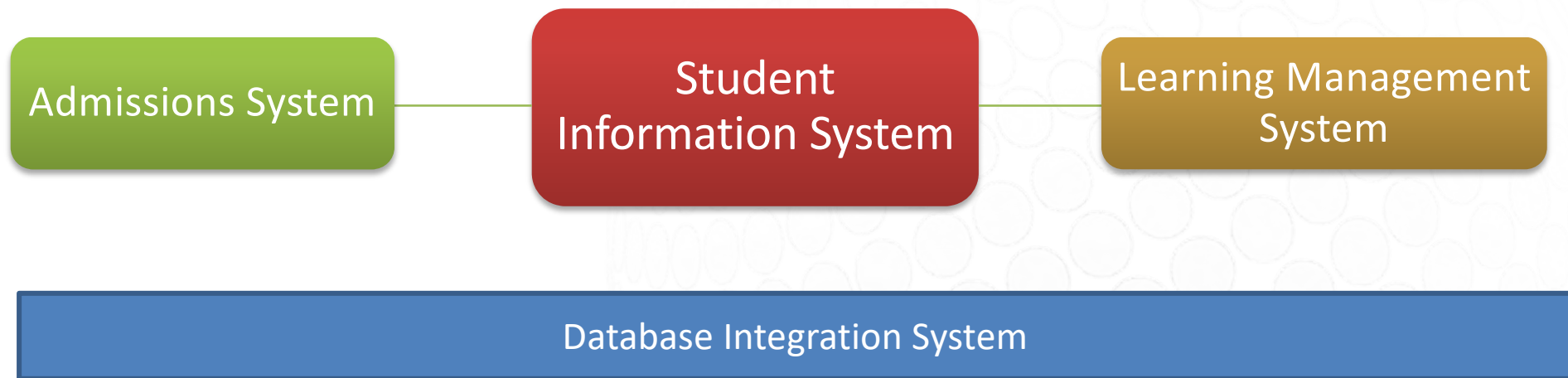


Specific processes vary by school.

What does this tell us about our school?

- Process and procedure
 - Opens up discussions about inefficiencies and connected relationships
- Needed data systems
 - What systems do we need and how should they talk?
- Personnel and tasks
 - Who is involved, at what point, and doing what function?
- Data
 - What information is collected and used and for what purpose

Data systems to facilitate our new student workflow



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What does this mean? Where do I go?

1. Know your data – what you have and what you want
2. Learn your processes...and be prepared to change them.
 1. Either your process will change to meet the system or the system changes to meet the process
 2. The latter is far more expensive
3. Hold your data systems to account – they must meet your needs and all work together
4. Start asking question that the data should be able to answer
 1. What are our conversion ratios for admissions?
 2. How much does it cost to recruit a teacher?
 3. What was the value add on learning for XXX project?

Key Takeaways

- Data is vital to the current and long term life of an international school
- Schools must know and manage their data
- Big Data analytics is coming to education (if its not here already)
- Improper data systems can be the largest operational impediment in a school
- Synchronized data systems are essential
- Workflows inform:
 - Data
 - Systems
 - Processes
 - Personnel
- It's vital to map a school's workflows, data systems, and data on hand

“If you torture the data long enough, it will confess.”
Ronald Coase, Economist

QUESTIONS? COMMENTS?

Connect with me for further information:

Email: matt@internationalledtech.com

Twitter: [@mattharrisedd](https://twitter.com/mattharrisedd)