Think Like a Librarian

Fresh Perspectives from a Time-Honored Tradition

A tale of two librarians

Amalia Child

Jenna Jordan

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THE UNIVERSITY of NORTH CAROLINA at CHAPEL HILL

School of Information Sciences
UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

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June 2024, Boston

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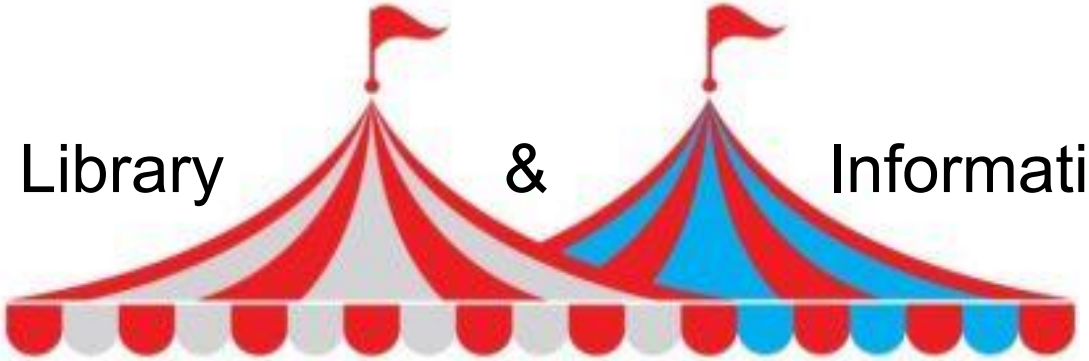
Library & Information Science



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Metadata & Cataloging

K-12 School Libraries

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Special Libraries

Scholarly Communication

Records Management

Digital Curation & Preservation

UX Design

Data Curation

Research Data Management

Information Architecture

Knowledge Management

Search & Information Discovery

Digital Asset Management

Taxonomy & Ontology

Corporate Libraries: A *very* selective timeline

1909

Special Libraries Association (SLA) is founded. The slogan is "Putting Knowledge to Work." The name was never popular.

1931

The Five Laws of Library Science: S. R. Ranganathan proposes foundational principles for operating a library system.

1937

American Documentation Institute (ADI) is founded. Its initial focus was on microfilm technology for information distribution.

1945

As We May Think: Vannevar Bush calls on scientists to focus on building the future of knowledge systems.

1957

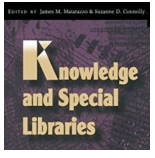
Desk Set: Hepburn's corporate librarian meets Tracy's mechanical brain.

1968

ADI renamed American Society for Information Science (ASIS). Membership is up 7x.
A merger with SLA is considered but not pursued.

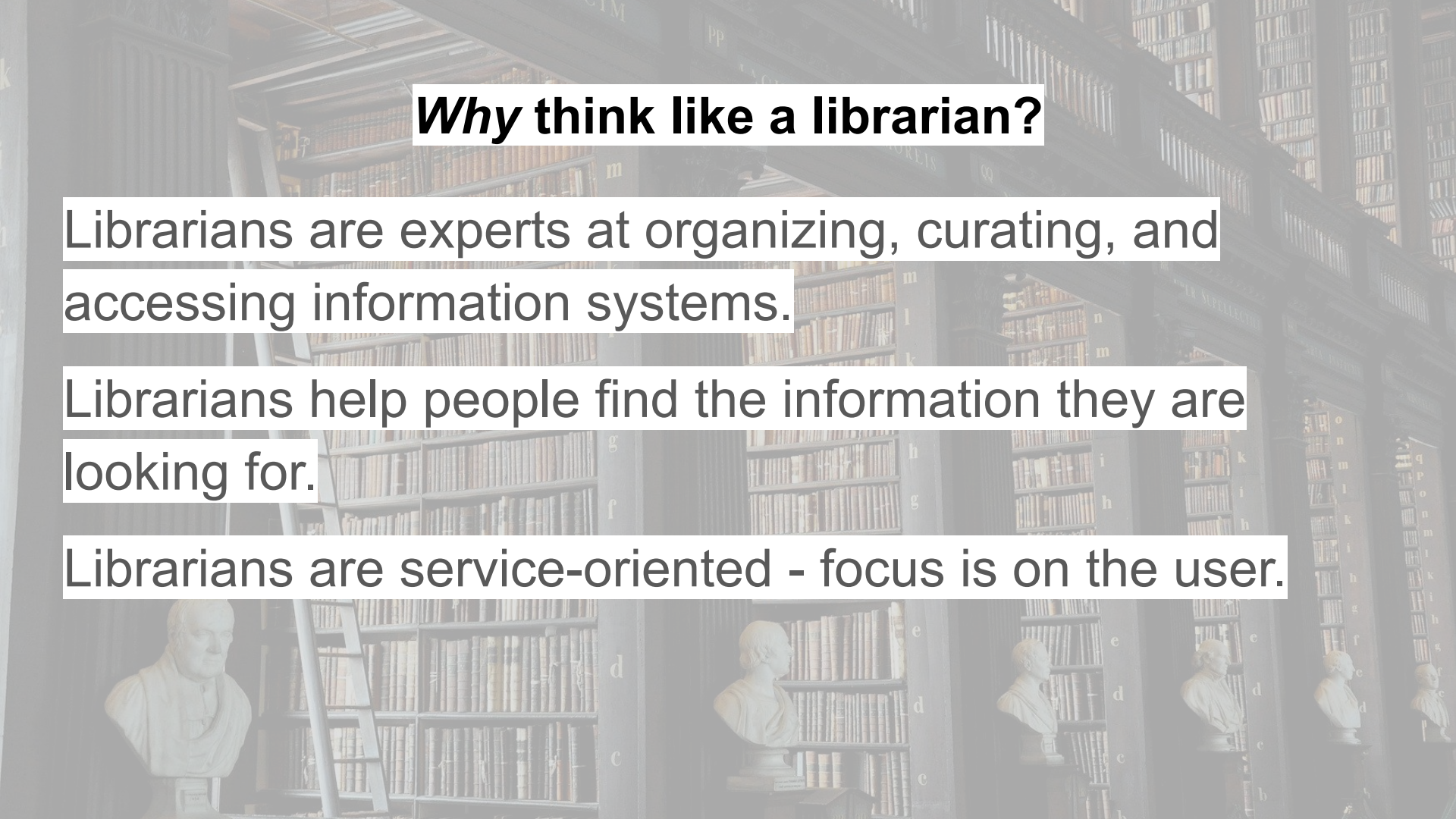
1993

Blow Up the Corporate Library: Davenport & Prusak recommend that librarians ditch the "warehouse" model of information management and team up with IT/data teams or risk extinction.



2025

SLA merges into ASIS, now international and known as the Association for Information Science & Technology (ASIS&T).



Why think like a librarian?

Librarians are experts at organizing, curating, and accessing information systems.

Librarians help people find the information they are looking for.

Librarians are service-oriented - focus is on the user.

From dbt's Analytics Engineering Guide on Data Cataloging

Our Favorite Metaphor

Analytics engineering is really the *organization* of an *organization's information*.

Analytics engineers are data librarians, and documentation is our Dewey decimal system to catalog information.

Someone may not know precisely where to begin on a project, so they'll ask the analytics engineer, aka the librarian, to point them in the right direction.

And at other times, they'll know exactly what they're looking for and delve directly into the Dewey decimal card catalog (aka the documentation) themselves.

Either way, both the analytics engineer and the documentation are here to help.

Relying 100% on an analytics engineer is inefficient, yet relying entirely on documentation lacks comprehensiveness. Having both empowers people to find the information they need in the most direct, efficient way possible.

Jessica Talisman, MSLIS

Intentional Arrangement

From Metadata to Meaning

The Knowledge Infrastructure

JESSICA TALISMAN
MAY 21, 2025

57 4 14 Share

"The greatest enemy of progress is the illusion of knowledge."

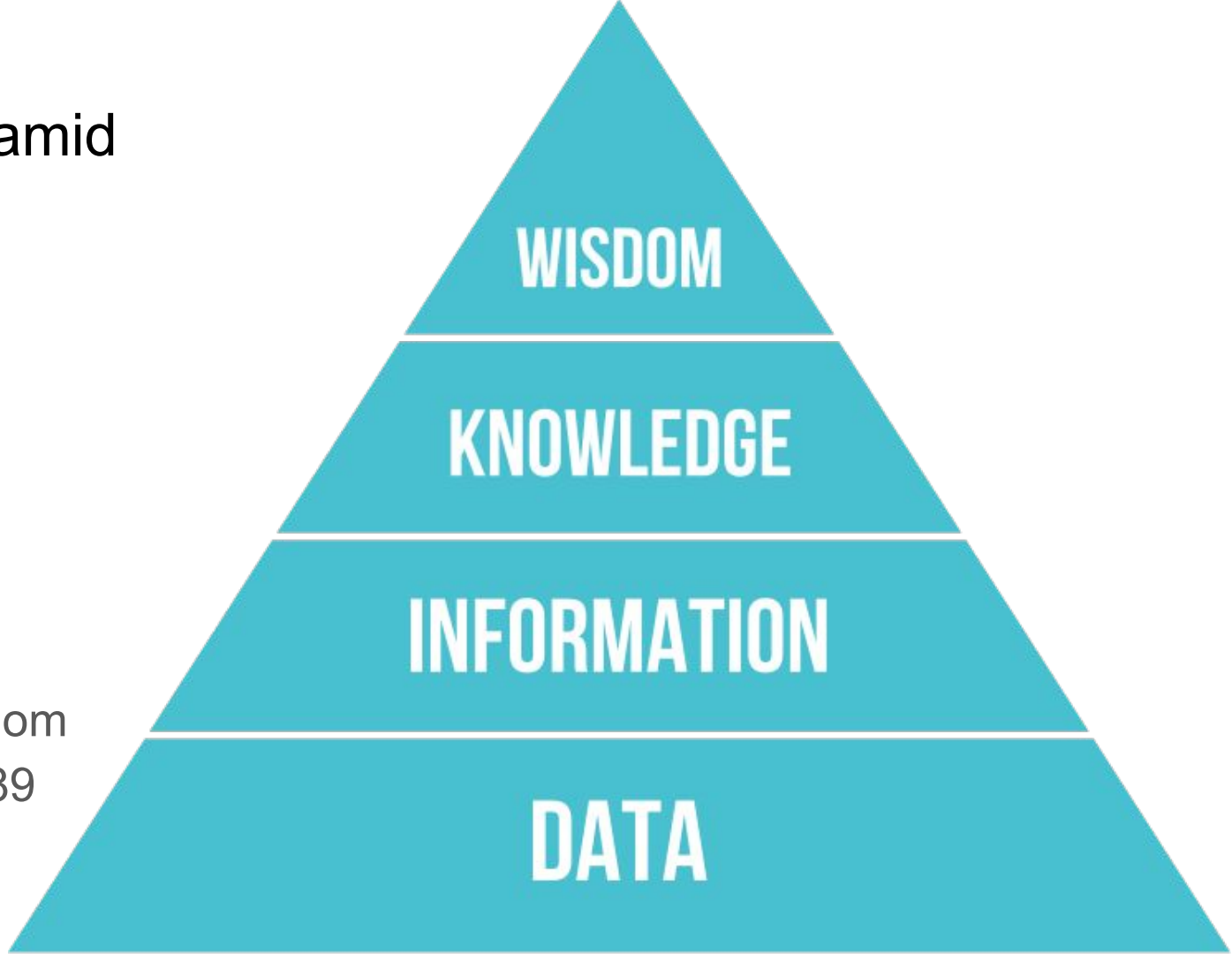
— John Young, Astronaut

Introduction

Knowledge is dynamic, not static. Knowledge, by definition, is relative to human beings— emerging through brain development, lifelong learning, and the storage of perceived facts in memory. An extended definition of *knowledge* frames it as a characteristic of social and cultural entities—manifesting in forms such as collective knowledge, knowledge economy, institutional knowledge and knowledge bases. The


From Data to Wisdom

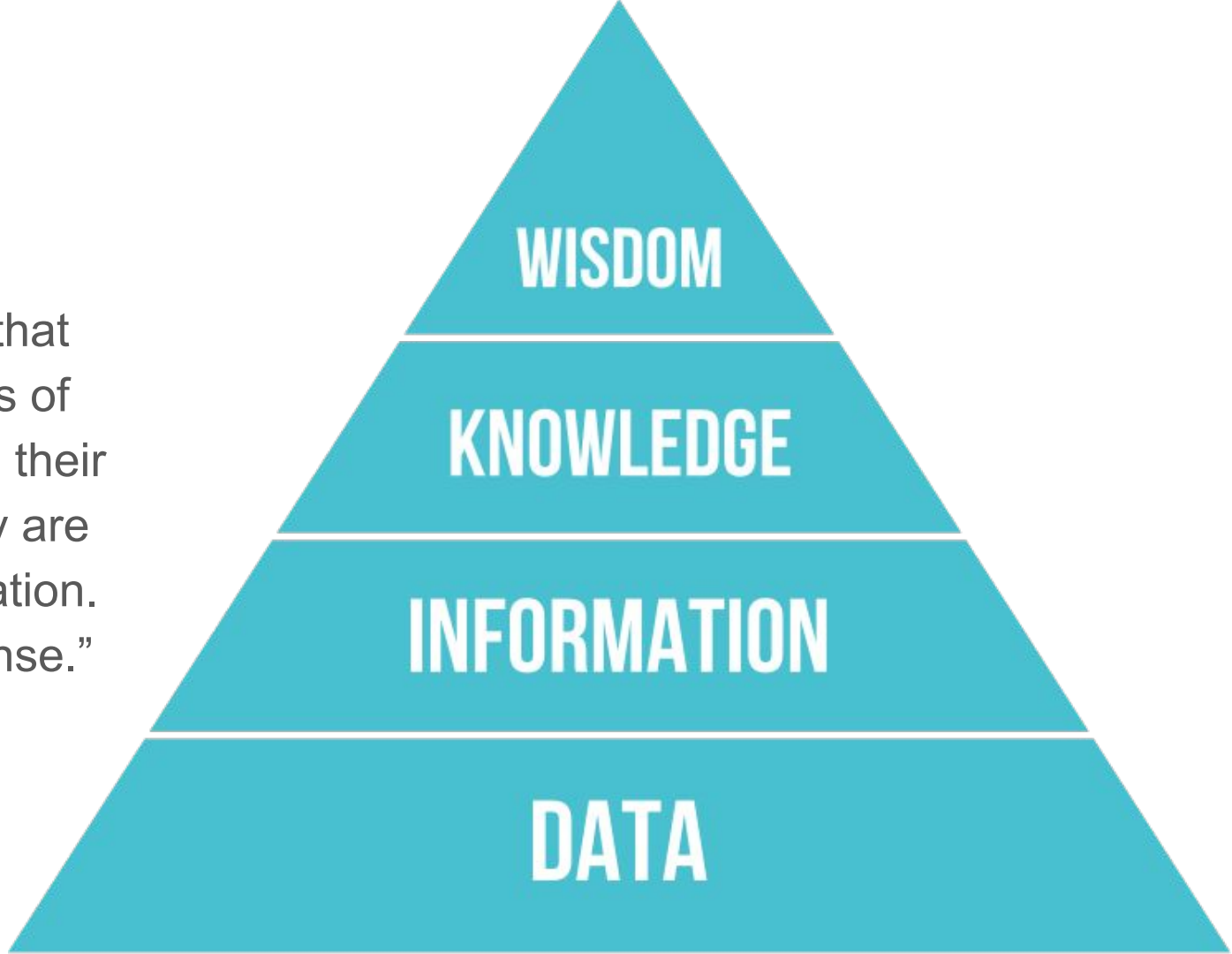
The DIKW Pyramid



All quotes from:
From Data to Wisdom
Russell Ackoff, 1989

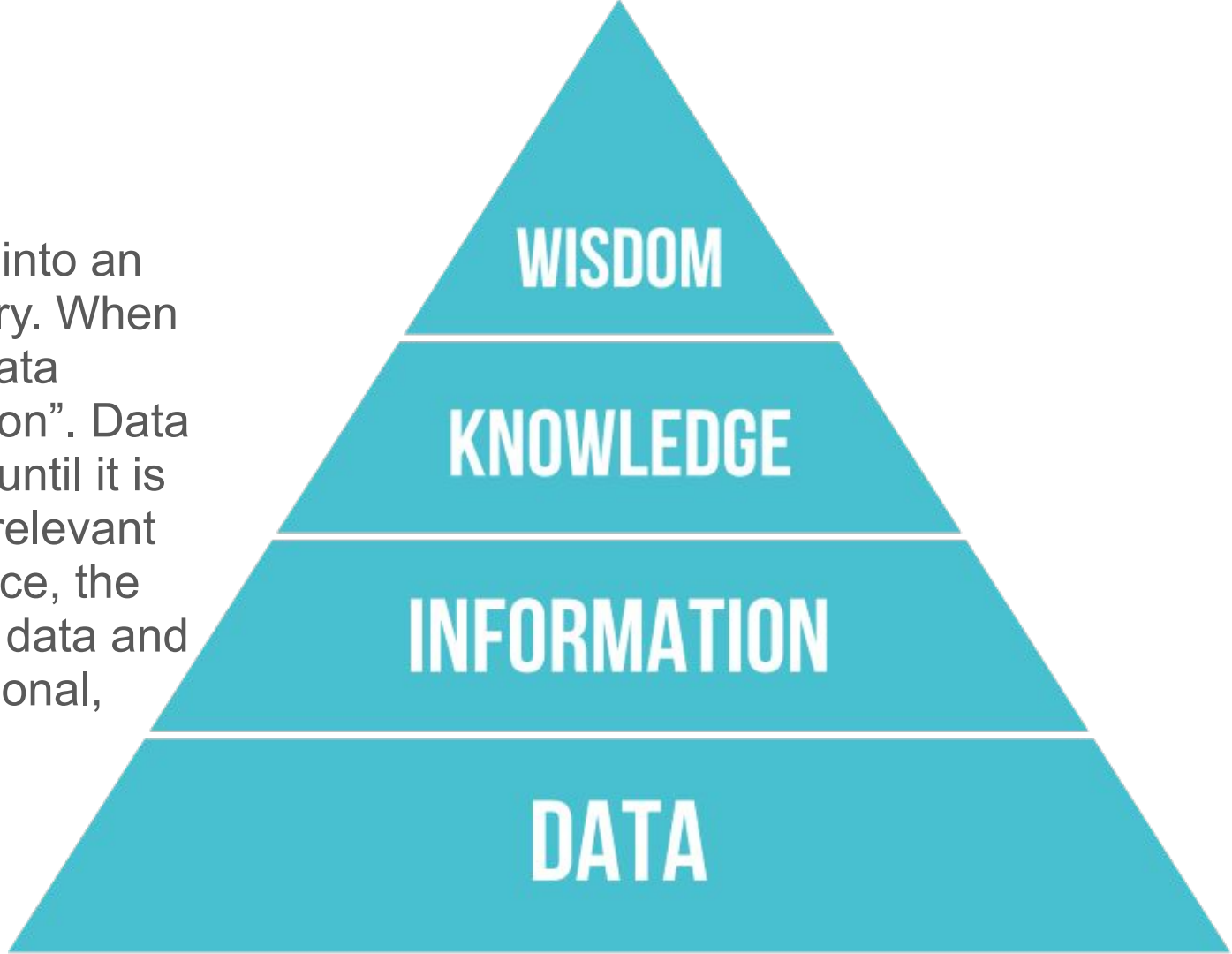
Data

“Data are symbols that represent properties of objects, events and their environments. They are products of observation. To observe is to sense.”



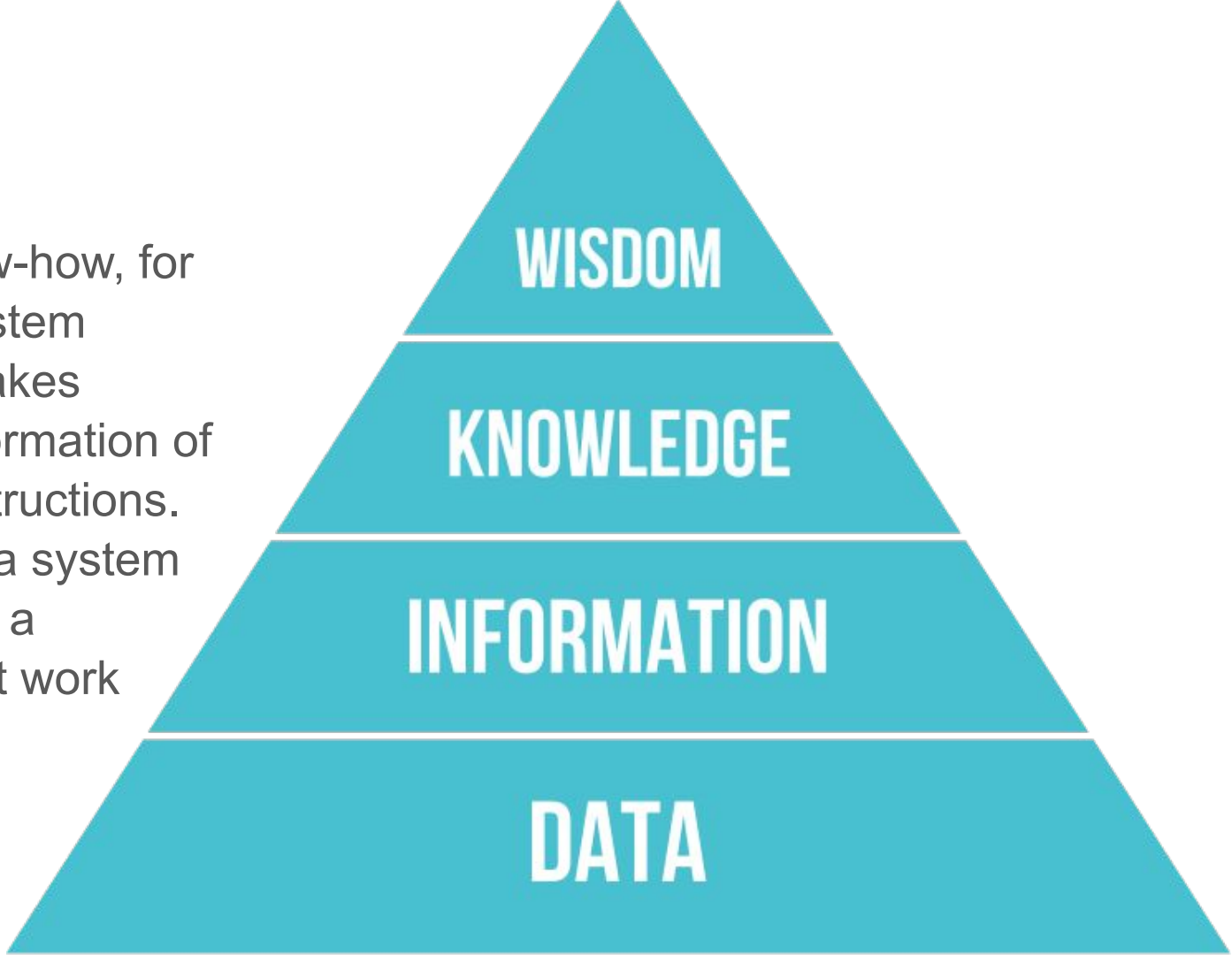
Information

“Data is processed into an answer to an enquiry. When this happens, the data becomes “information”. Data itself is of no value until it is transformed into a relevant form. In consequence, the difference between data and information is functional, not structural.”



Knowledge

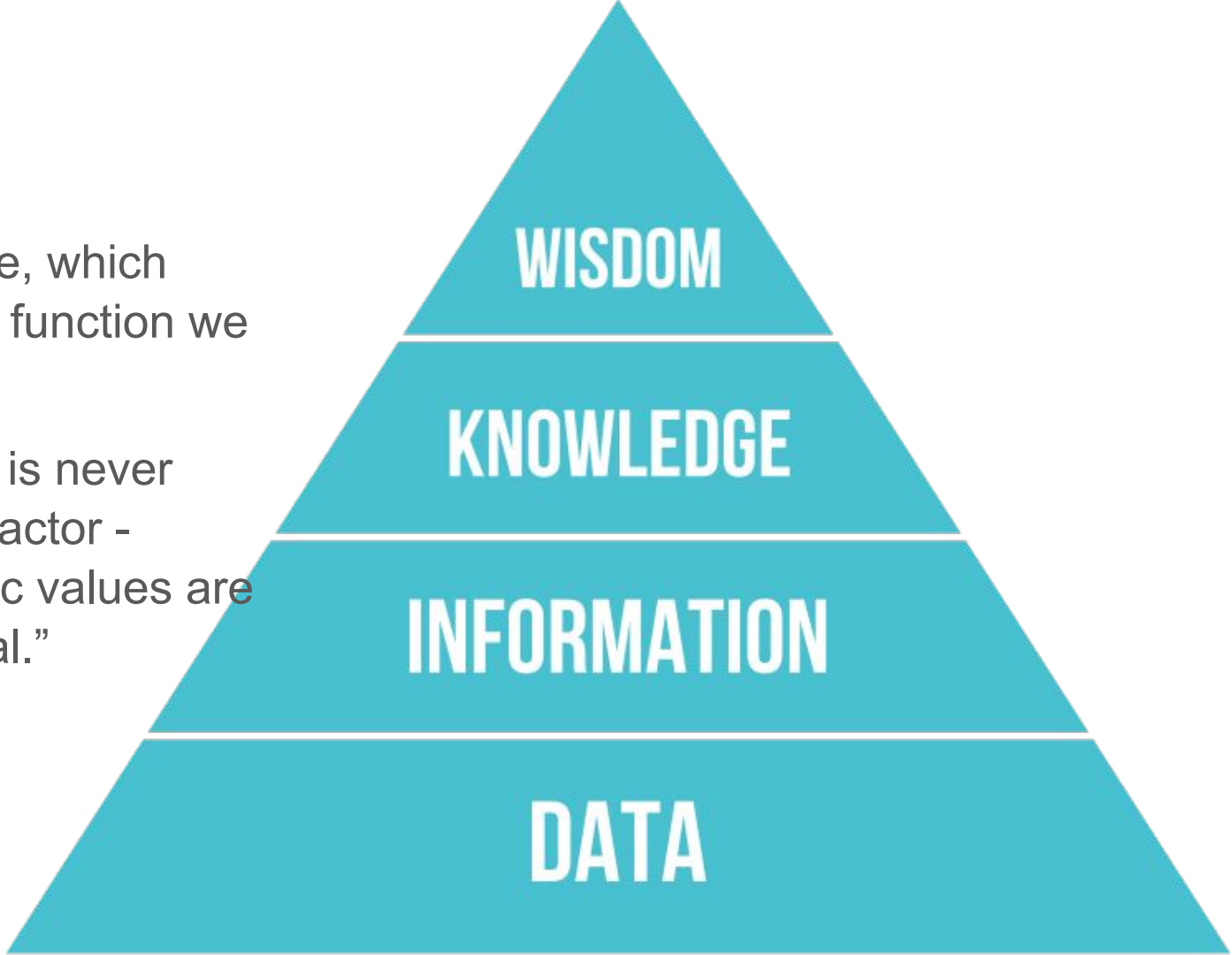
“Knowledge is know-how, for example, how a system works. It is what makes possible the transformation of information into instructions. It makes control of a system possible. To control a system is to make it work efficiently.”



Wisdom

“Wisdom adds value, which requires the mental function we call judgement.

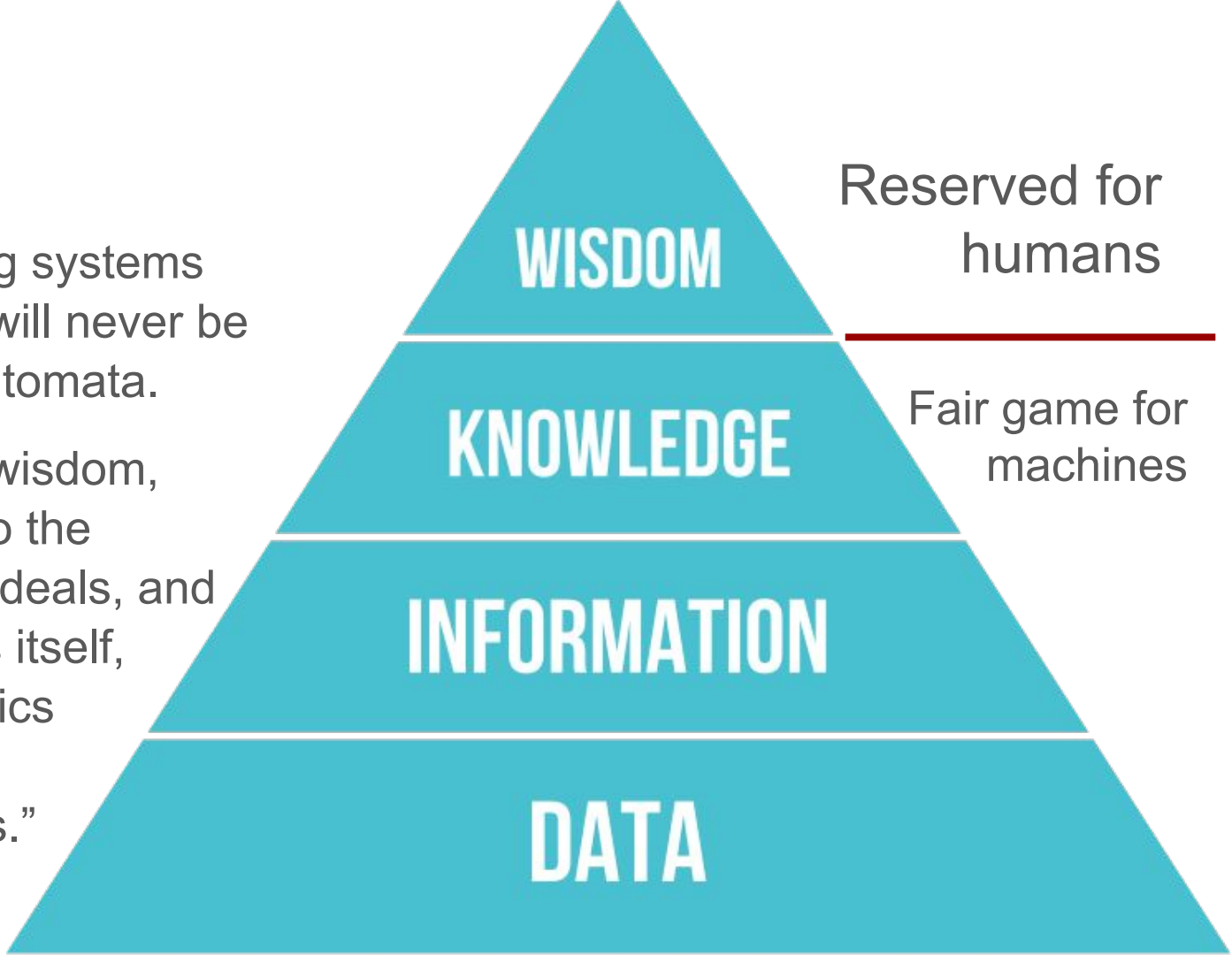
The value of an act is never independent of the actor - ethical and aesthetic values are unique and personal.”



Wisdom

"Wisdom-generating systems are ones that man will never be able to assign to automata.

It may well be that wisdom, which is essential to the effective pursuit of ideals, and the pursuit of ideals itself, are the characteristics that differentiate man from machines."



IsA DataThing
by Ashleigh Faith

Knowledge Graph - AI -Data Science - Semantics

Ashleigh Faith

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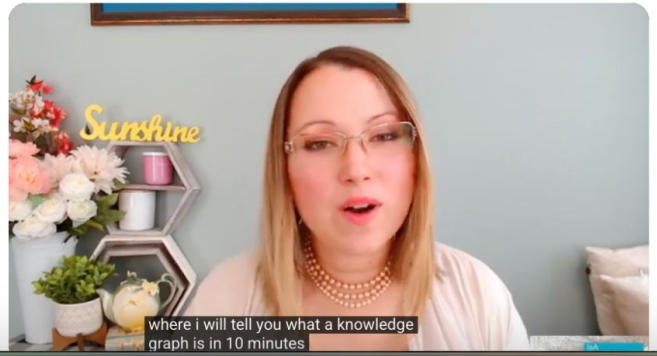


Business Persons' Guide to: What is a Knowledge Graph? In 10…

4,439 views • 4 years ago

There is a lot of mystique surrounding knowledge graph that it can sometimes be daunting to approach graph technology. I am here to let you in on a little secret, that you don't need to worry about all the jargon and the tech behind them to understand fundamentally what graph is and why people are talking about it. Check out the video to learn more (and take part in the giveaway)!…

READ MORE

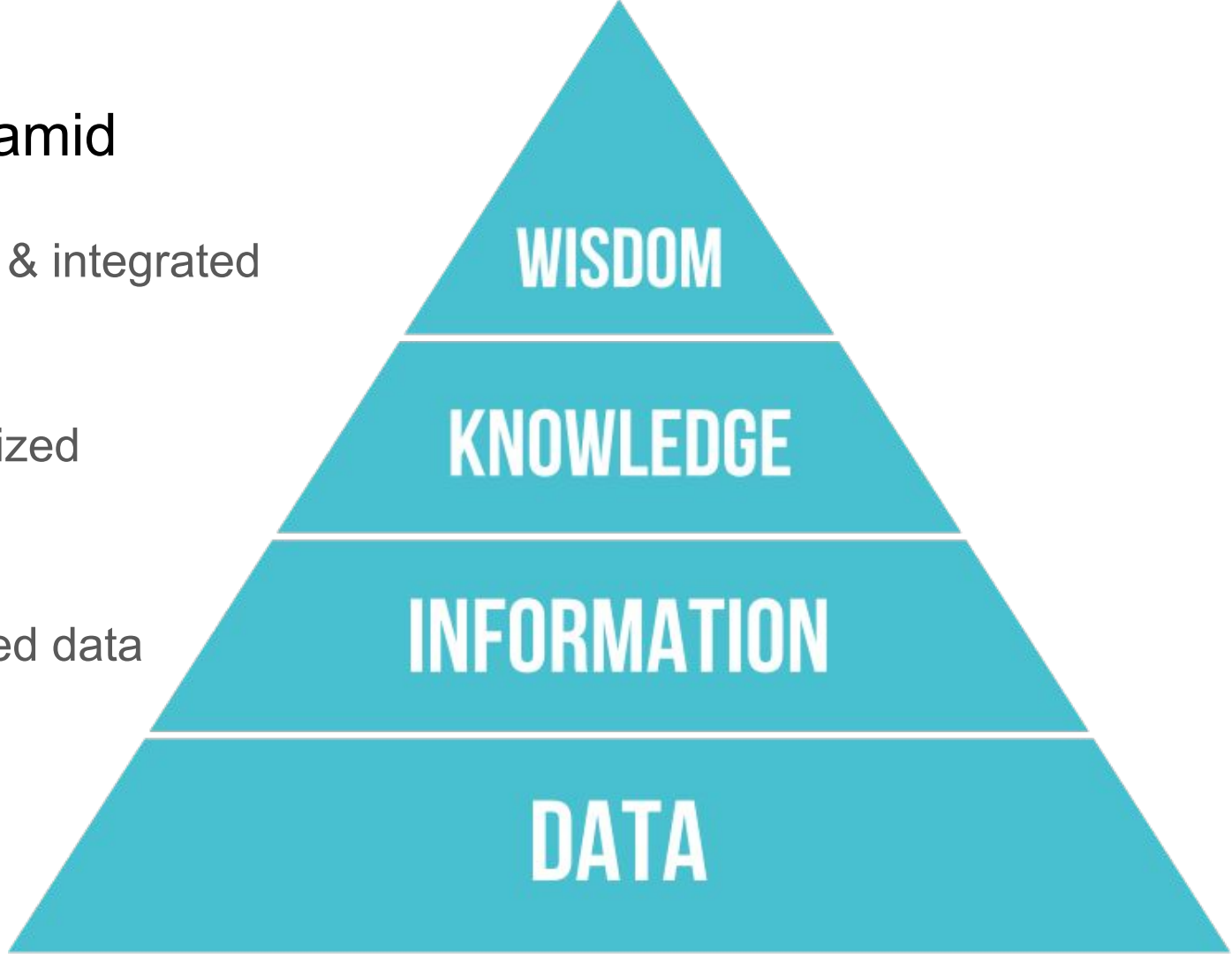
The DIKW Pyramid

Knowledge distilled & integrated

Information internalized

Organized/processed data

Raw material of information




The Reference Interview

The librarian's reference interview for data teams

What data teams can learn from the reference interview librarians perform to identify and serve true information needs

AUTHORS
Jenna Jordan

AFFILIATIONS
Data Librarians #datalibs

PUBLISHED
June 30, 2025

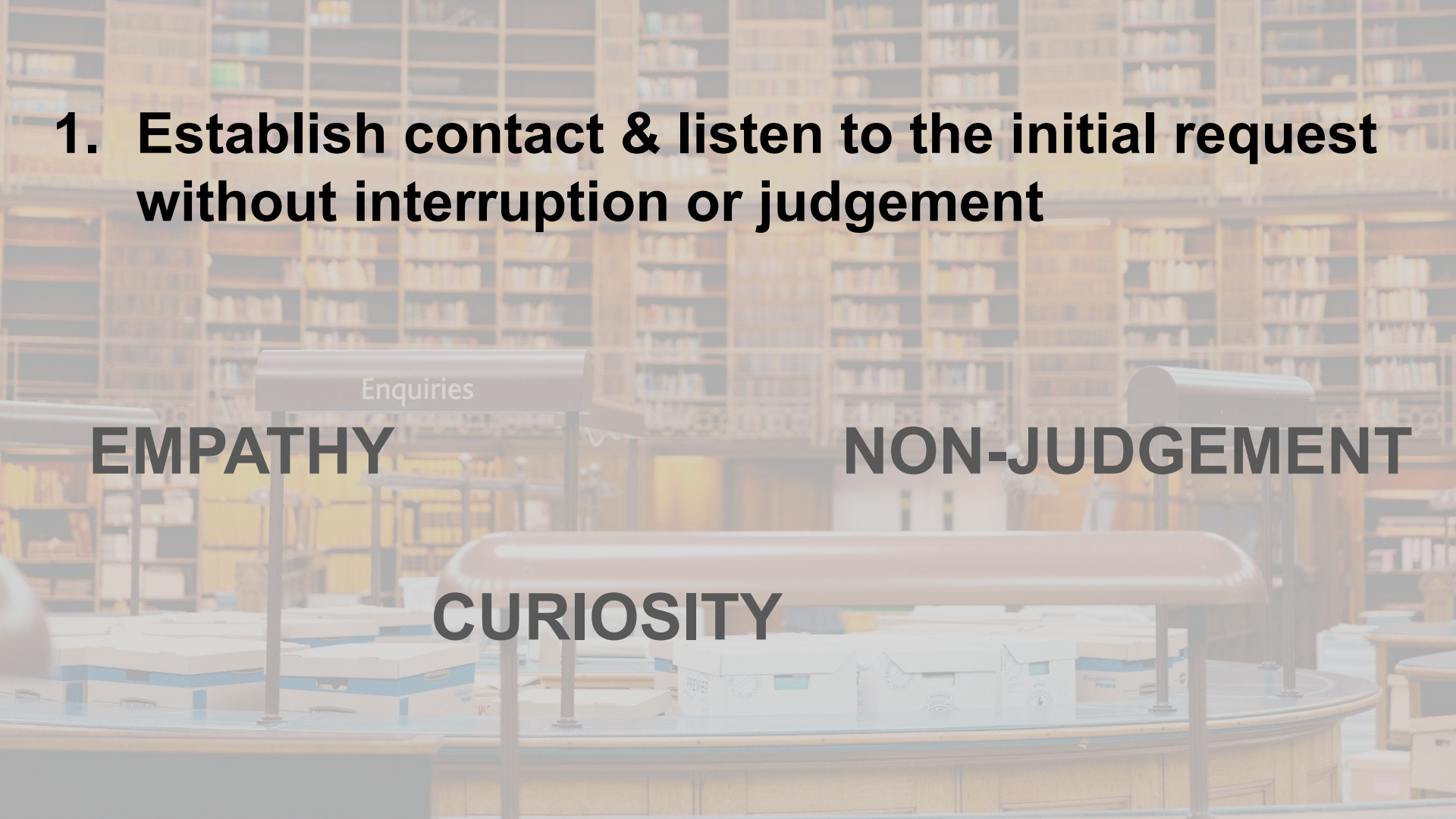
Contents

People (patrons, stakeholders) rarely start out asking (librarians, data teams) for the information they actually need.

The goal of the reference interview is to identify their true information need.


Enquiries

1. **Establish contact & listen to the initial request without interruption or judgement**



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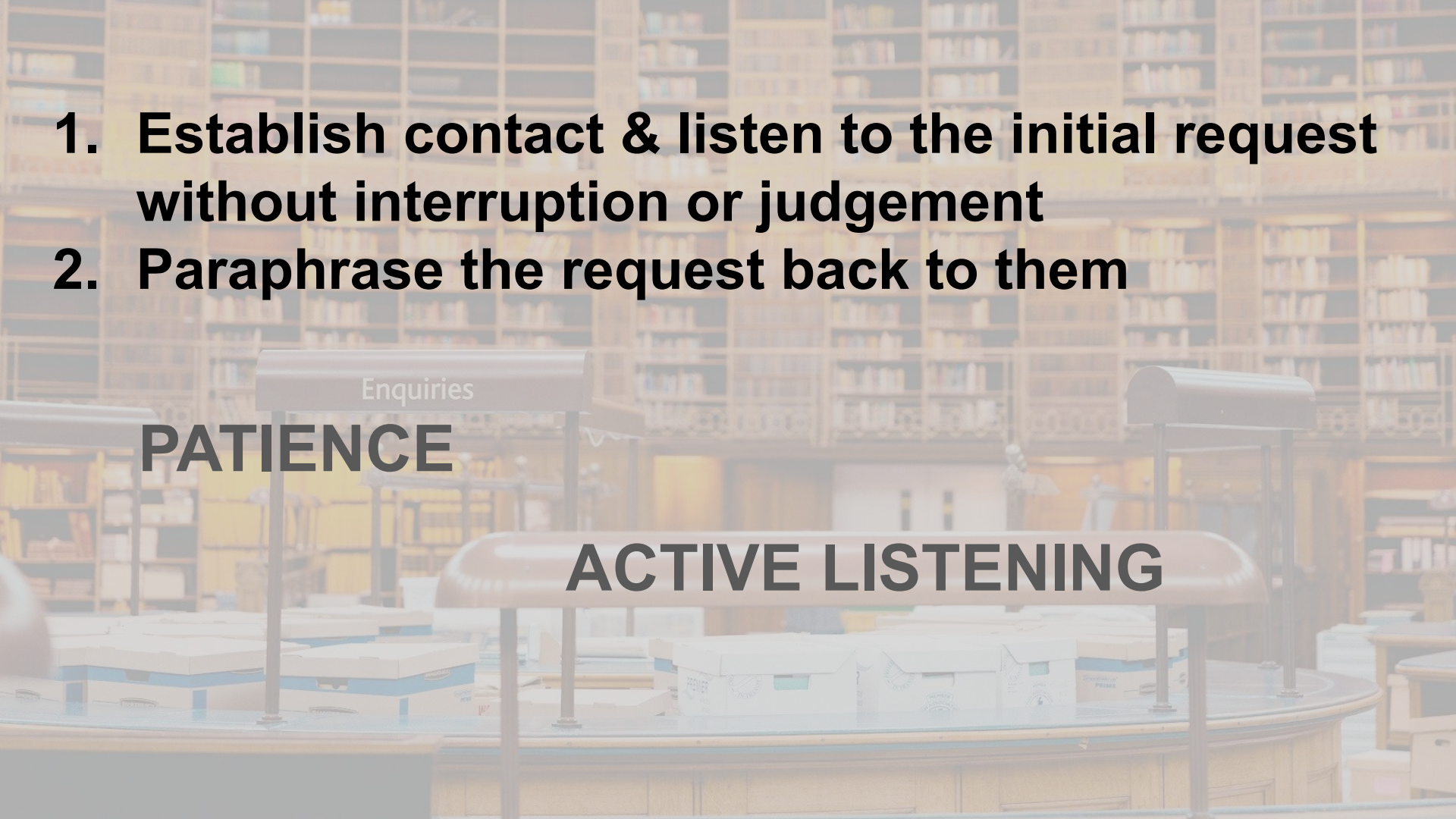
2. Paraphrase the request back to them



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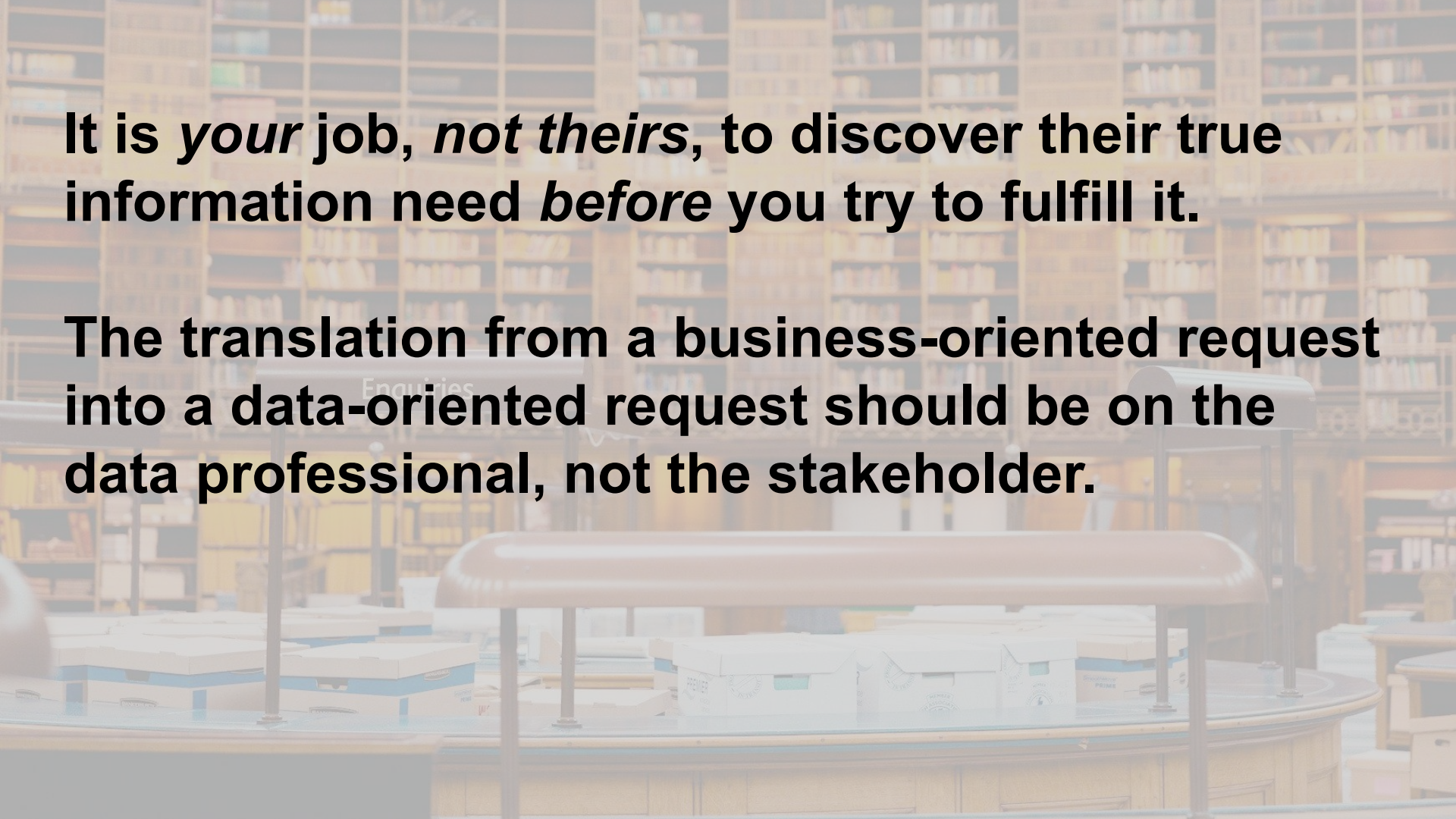
2. Paraphrase the request back to them
3. Ask open ended questions first, followed by clarifying close-ended questions
4. Restate the request yet again, now altered by their responses to your questions. Repeat until the rephrased request is confirmed as accurate

5. Collaborate to find an answer to the rephrased information request, using the interviewer's expertise in navigating the information system and the interviewee's guidance and background knowledge. Depending on the need/relationship, either can be the "driver".

6. Verify that the true information need was met. If not, the process can be repeated, or the requestor may need to be directed to further resources if their information need is beyond the capacity of this process. Finally, you can ask for feedback on the process.

Roles of a Reference Librarian

- **Information provider**
- **Instructor**
- Communicator
- Relationship Builder
- Guide/advisor
- Counselor
- Partner
- Friend
- Philosopher
- **Expert**



It is *your* job, *not theirs*, to discover their true information need *before* you try to fulfill it.

The translation from a business-oriented request into a data-oriented request should be on the data professional, not the stakeholder.

Perspectives to consider

1. For the Data Analyst
2. For the Head of Data
3. For you… and your favorite AI chatbot

For the Data Analyst

Talk to your stakeholders more (especially at the start).

Never assume that their initial request matches their true information need.

Make it your goal to uncover their true information need.

Cultivate an empathetic, non-judgemental, and curious mindset.

Practice active listening techniques.

Teach your stakeholders how to use the available tools to answer their questions for themselves next time by pairing with them.

6 steps of the reference interview as a formula for a guided conversation to do project intake & requirements analysis.

For the Head of Data

Cultivate an environment & culture that encourages your team to practice the reference interview

Create your team’s version of a “reference desk”

Stop thinking of “service” as a dirty word - think librarian’s reference desk, not IT Help Desk

For you… and your favorite AI chatbot

Adopt the role of a reference librarian… with yourself to elevate your prompt engineering skills

Interview yourself to develop a complete and fully articulated version of your true information need

Practice makes perfect!

CLEAR framework by Dr. Leo Lo, Dean of Libraries and Advisor for AI Literacy at the University of Virginia: **C**oncise, **L**ogical, **E**xplicit, **A**daptive, **R**eflective

Hana Lee Goldin, MSLIS

CARD CATALOG

The Reference Interview You're Not Having with ChatGPT

How to figure out what you actually need before asking AI for anything.

HANA LEE GOLDIN, MLIS
DEC 11, 2025

Last week, my colleague asked ChatGPT to “create a performance review template.” Twenty minutes later, she was practically crying in our Zoom call. “It gave me this generic corporate nightmare,” she said, sharing her screen. “Like something from a company that makes employees rank each other Hunger Games style.”

I asked her three questions: Who’s this for? What specific behaviors are you trying to assess? What happened with your last template that made you want a new one?

After the Reference Interview

Record the results of the reference interview - what information did they need, and were they able to find it?

Collect all of these reference interview results in a central database/spreadsheet

Analyze the results & find patterns

Make it easier for people to access the information they need - by writing libguides, curating the collection, and community outreach

Expand beyond just reference interview results… to search results… database queries… and even inquiries made to chatbots

Katie Bauer

The next data bottleneck

What clever or crazy data questions do people ask for when there's nothing to stop them from asking?

KATIE BAUER
DEC 30, 2025

41 3 2 Share

Nearly a decade ago, a book called Everyone Lies was published. Written by a former Google data scientist, it discusses the power of Big Data to reveal who people actually are, as opposed to who they present themselves as, with a particular focus on digging into search engine query data. The book feels of a different era now, but at the time the analysis was more surprising. It suggested that when people can type anything they want into a text box with no consequences to their words, they act a bit… uncivilized. From fuming about their prejudices to spiraling about medical anxieties to indulging their fetishes, the contents of a query stream tell us that social-desirability bias has not given us an accurate impression of what's going on in the average person's head.

In short, what people say want and what they actually do are rarely the same.


The Five Laws of Library Science

Libraries Evolve

For centuries, librarians were effectively tasked with **collecting and protecting books**–medieval libraries even chained volumes to the shelves.

But by the early 1900s, the rise of democracy and printing technology had inspired communities around the world to expand access to books.

A **paradigm shift** was afoot:

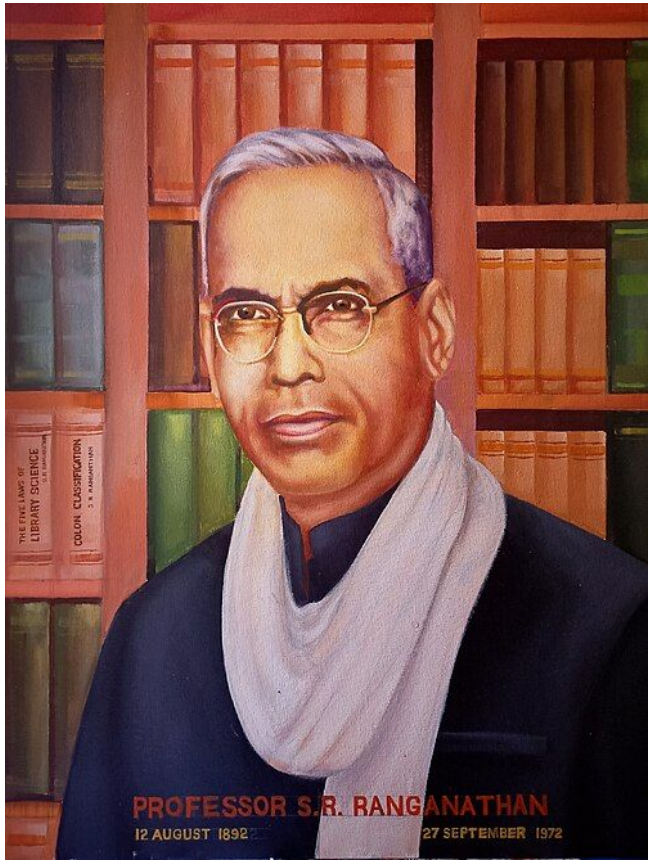
- **Professionalized librarians:** Training and best practices emerged for securing funding, assessing the community's needs, selecting and cataloging materials, etc.
- **New architectures and lending policies:** Patrons could browse the collection for themselves and even take books home.

This should sound familiar to data professionals today!

The Five Laws of Library Science

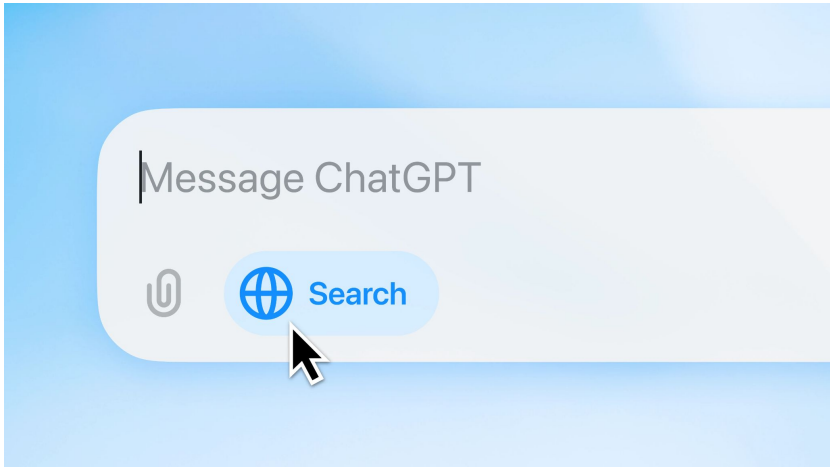
In 1931, S. R. Ranganathan codified the new practices in these five laws, which are his best-known work:

1. **Books are for use:** The point of a library is to provide access to books, not to store or preserve them.
2. **Every reader his or her book:** Librarians should serve a wide range of patrons and information needs, not just scholars.
3. **Every book its reader:** All books should have a place in the library, even if they have a narrow audience. But when they lose their audience, let them go.
4. **Save the time of the reader:** Patrons should be able to find what they need quickly and easily, including the library itself.
5. **A library is a growing organism:** Libraries should be dynamic, growing in size and evolving in format over time.



“Who knows that a day may not come…when the dissemination of knowledge…will be realised by libraries even by means other than those of the printed book?”

– S. R. Ranganathan, 1931



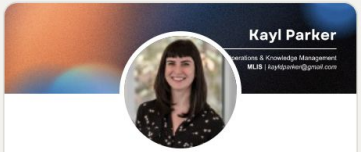
The Five Laws of Data Enablement: How the father of library science would make his data team indispensable

In 2024, Amalia adapted Ranganathan's laws for *Locally Optimistic*, offering them as a grounding touchstone in the anxious age of AI:

1. **Data are for use:** The storage and processing of data are only valuable insofar as they support the *use* of data.
2. **Every stakeholder their dataset:** Empower *everyone* to use data, not just specialists like analysts and data scientists.
3. **Every dataset its stakeholder:** *Advocate* for the use of data. *Curate* your data and services to stay fresh and relevant.*
4. **Save the time of the stakeholder:** Optimize for self-service and provide multiple channels to *meet people where they are*.
5. **A data function is a growing organism:** *Plan for growth* and an *ongoing evolution* of our form!

**Amalia is disappointed not to be at Data Day to explore the third law further, as we had planned. Stay tuned!*

Wrapping Up



Kayl Parker

Senior Operations Consultant | MLIS | Driving Organizational Effectiveness

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A little over a week ago, I hosted a resume workshop with MLIS students at the **University of Washington Information School**. The title will tell you a lot about the content—Speak Their Language: Translating Your MLIS Skills for Corporate Resumes & Beyond. 🚀

If you've been following my posts, you know my thesis: MLIS grads have valuable skills. Corporate environments just don't speak "library." So we spent some time together learning how to speak their language.

Here's how the workshop unfolded:

Confidence Factor 💪
MLIS graduates are already qualified for 40% of the top 15 in-demand skills for 2030 (per LinkedIn's Work Change Report). You have adaptability, process optimization, stakeholder management, and risk assessment already. That's not bragging—that's fact.

Translation 🔄
Reference interviews = stakeholder management; needs assessment
Collection development = strategic resource allocation
Information systems = process optimization; strategic operations
And so many more...
Same skills, different vocabulary. We mapped actual job postings to library work and practiced using corporate language (stakeholders, data-driven, cross-functional, workflows, deliverables, etc.)

Impact Over Tasks 📊
"Helped patrons find books" is true. "Managed 200+ weekly user interactions with 95% satisfaction" hits different. The secret? Track outcomes, not just tasks. Did you improve efficiency? By how much? Increase engagement? Quantify it (even if you estimate).

Hire librarians!

Maybe even… become a librarian yourself?

Images are from the movie “Desk Set”


THE END