MATERIALS WEEK EUROPE

The next speaker is...

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Uncountable

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The Hidden Reason Most AI Initiatives Fail – And What Actually Moves the Needle

Scan below for Conference Agenda

The Hidden Reason Most AI Initiatives in Materials R&D Fail — And What Actually Moves the Needle

February 2026

Presented by

Bill Qin | Sales Development Manager | Uncountable

The AI Imperative

*AI **won't replace scientists**.*

*But **scientists who use AI will replace** those who don't.*

The Journey We'll Take Today

Uncountable is the #1 Solution for Data Management

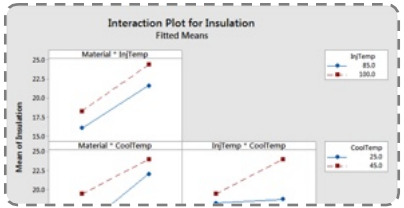
150+ Clients Span Across a Variety of Industries

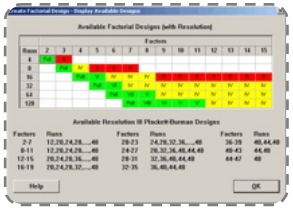
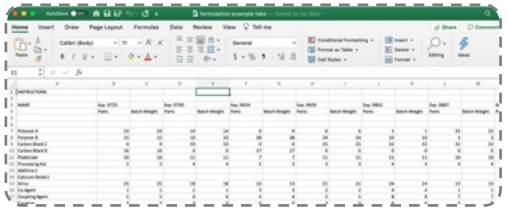
How Most Labs Actually Operate:

Decentralized, Unstructured, & Fragmented Data

Data is collected & sits independently across the different teams and systems used throughout the entire R&D value chain…

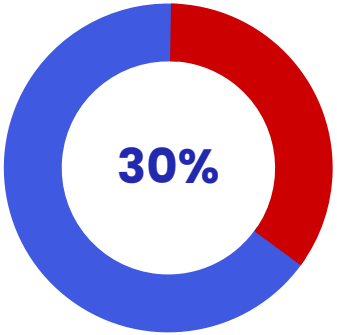
Raw Materials	Formulations	Processing	Formula Properties	Product Properties
• Physical Attributes • Chemical Attributes • Batch History • Prices • Regulatory • Compliance	• Compositions • Calculations • Multi-part systems • Order of Addition • Dispersions & Intermediates	• Mixing Conditions • Curing Parameters • Metadata	• Physical Properties • Analytical Measurements • Observations • Images • Curves & Reports	• Application Testing • Customer Feedback • Panel Testing



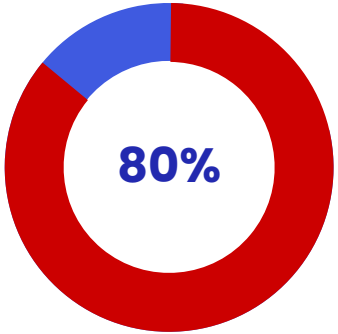

As a result:

Scientists spend,



of their time
managing, searching, cleaning,
and analyzing data*

Of that time,



is actually spent
cleaning and
searching for data**

*Customer Surveys
**McKinsey 2012 & IDC 2019 Reports

The real goal isn't collecting more data — it's ***increasing the lifetime value of every experiment through reuse.***

Moving beyond retention towards utilization.

If I collect and store a data point today, how many times do I find that data point to be useful later on?

How many different future experiments can be based on the analysis of that data?

	Unstructured	Structured
Examples	• Spreadsheets • Word Documents • PDFs • Lab Journals/ELNs • Shared Drive	• Databases • LIMS • Inventory Systems • R&D databases
Advantages	• Free • Unrestricted entry of information • Known/second nature “habitual”	• Instant access to specific information/data • Shareable & scalable information • Intelligent insights & reporting
Disadvantages	• Limited scope & scalability for application of info • Ctrl+F keyword searching • Limited collaboration • Inability to innovate efficiently & at market-rate	• Requires intentional/deliberate entry of information • Change management • Migration of historical data into new system • Disciplined use

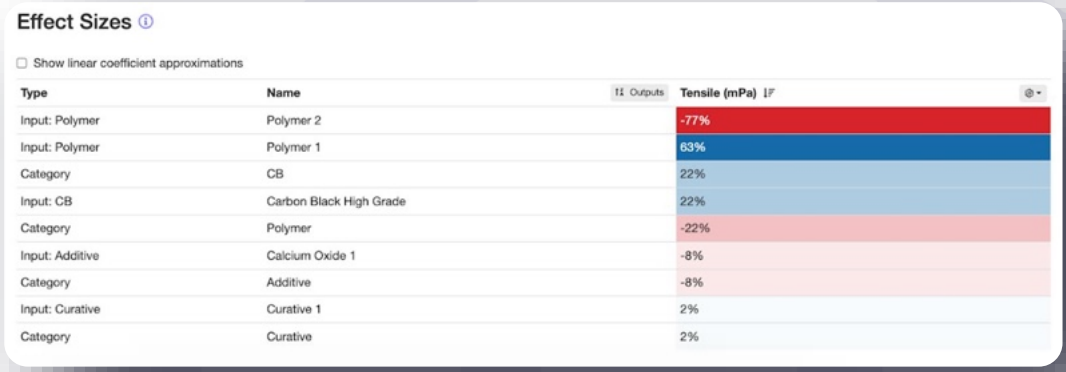
The 30-Second AI Readiness Test

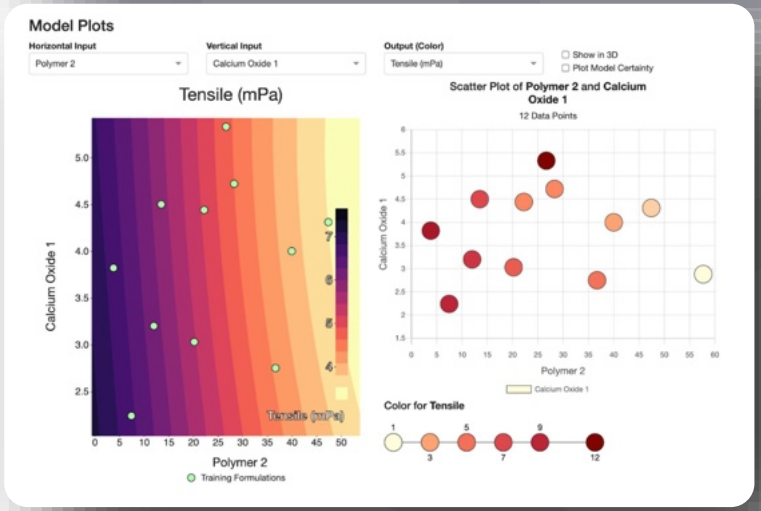
Scatter Plot Test

Can you generate this in under 5 minutes?

a scatter plot of ingredient X vs property Y, across all labs, over the past five years

Without manual cleanup





Tips on Change Management

Structure Before Sophistication

Place data model first. 80% harmonized and connected data beats 100% fragmented data.

One Single Shared Source of Truth

Reuse only happens when teams rely and trust the same structured memory.

Change Behavior, Not Just the Tools

Habits adopt gradually. Show quick wins. Make reuse part of daily workflow.

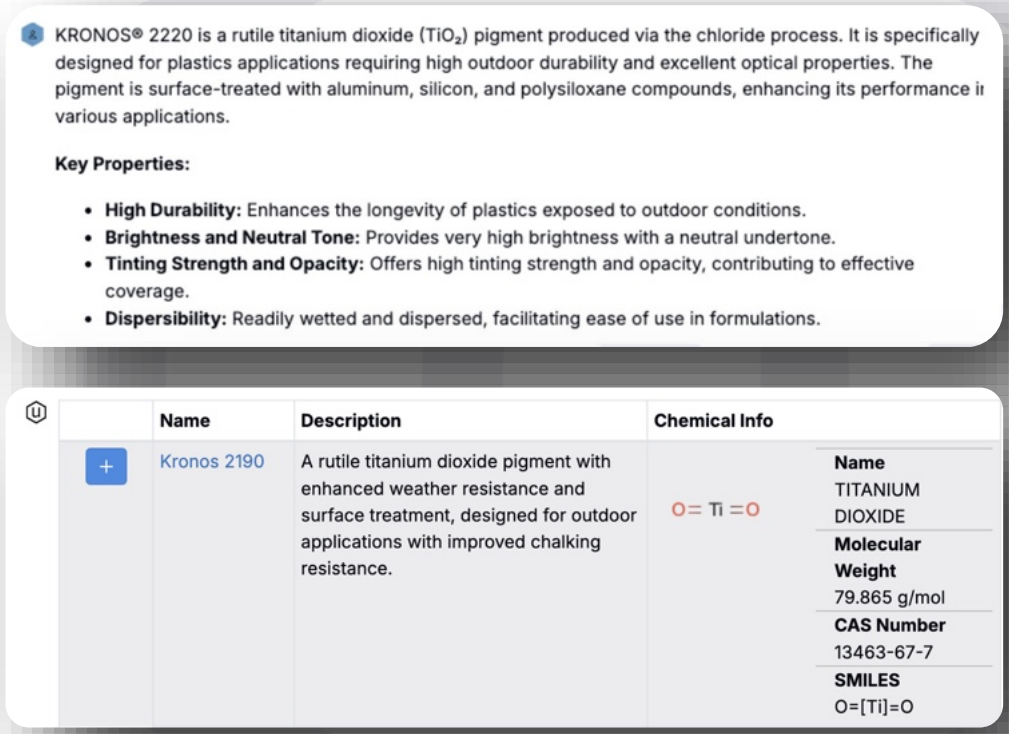
Smarter Ingredient Substitution

Powered by LLM

Simply ask Uncountable:

“I'm looking for alternatives to the ingredient Kronos 2220 to help with chalking performance.”

Without switching tabs



From Retrieval To Optimization

Powered by ML

Suggest experiments given:

Your constraints
Your targets
Your historical data

Without starting from scratch

Suggested Formulations

Recipe Name		Recipe 1	Recipe 2	Recipe 3	Recipe 4	Recipe 5	Recipe 6
Import Recipe?							
Ingredient 1	= 2.5	2.5	2.5	2.5	2.5	2.5	2.5
Ingredient 2	= 0.202	0.2021	0.2021	0.2021	0.2021	0.2021	0.2021
Ingredient 3	= 0.0121	0.01209	0.01209	0.01209	0.01209	0.01209	0.01209
Ingredient 4	[6.52, 10.2]		9.709	10.11	8.072	8.411	9.5
Ingredient 5	[10.3, 25]	22.71	22.71	17.27	18	18.62	18.69
Ingredient 6	[4.78, 10]	9.658	8.146		6.247	6.307	
Ingredient 7	[5.84, 10.1]	6.138	6.347	6.328	6.235	5.906	5.877
Ingredient 8	[5.2, 50]	27.86	39.03	32.46	30.69	46.62	49.81
Ingredient 9	[5.1, 14.3]	10.26	11.35	9.108	10.64	11.42	13.41
Ingredient 10	[14.8, 32]	20.67		22	17.4		
Ingredient 11		100	100	100	100	100	100
Calculation 1	[2, 4]	2.25	3.83	2.09	2.39	2.98	2.78
Calculation 2	[0.8, 1.2]	0.804	1.11	1.02	1.08	1.13	1.08
Calculation 3		3.16	3.87	2.89	3.21	3.01	2.81
Calculation 4		1.91	9.82	0.595	3.04	6.36	5.41
	Goal						
Predicted Output 1	≥ 300	221 ± 111	236 ± 111	224 ± 109	216 ± 107	210 ± 108	215 ± 109
Predicted Output 2	≥ 5	7.5 ± 2.75	5.82 ± 3.11	7.71 ± 2.88	7.39 ± 2.84	5.71 ± 3.08	5.94 ± 3.11
Predicted Output 3	≤ 4000	2100 ± 1390	1860 ± 1630	2140 ± 1580	2050 ± 1460	1810 ± 1760	1900 ± 1840
Predicted Output 4	≥ 2	2.5 ± 1.07	2.68 ± 1.15	1.94 ± 1.12	2.56 ± 1.07	2.46 ± 1.1	3.65 ± 1.18

CooperStandard

Business Challenges:

- Siloed, regional spreadsheets/legacy tools
- Inconsistent languages/formats; poor traceability/reuse
- 50% researcher time spent finding/merging data; duplicate work

Uncountable Impact:

1. **Single, standardized source for materials, recipes, history**
2. **Quick rollout (initial live in 6 weeks); highly responsive support**
3. **Productivity lift: saved each chemist more than 4 hrs/week**

"The Uncountable visualizations are robust and seamless with the data. It takes two clicks to get whatever information you need. It saves us countless hours over the course of a project."

-Benoit Beaubreuil | Material Data Engineer

Customer Profile:

Specialty chemicals company with a leading position in the development and production of systems and products for bonding, sealing, damping, reinforcing and protecting.

Flagship Implementation

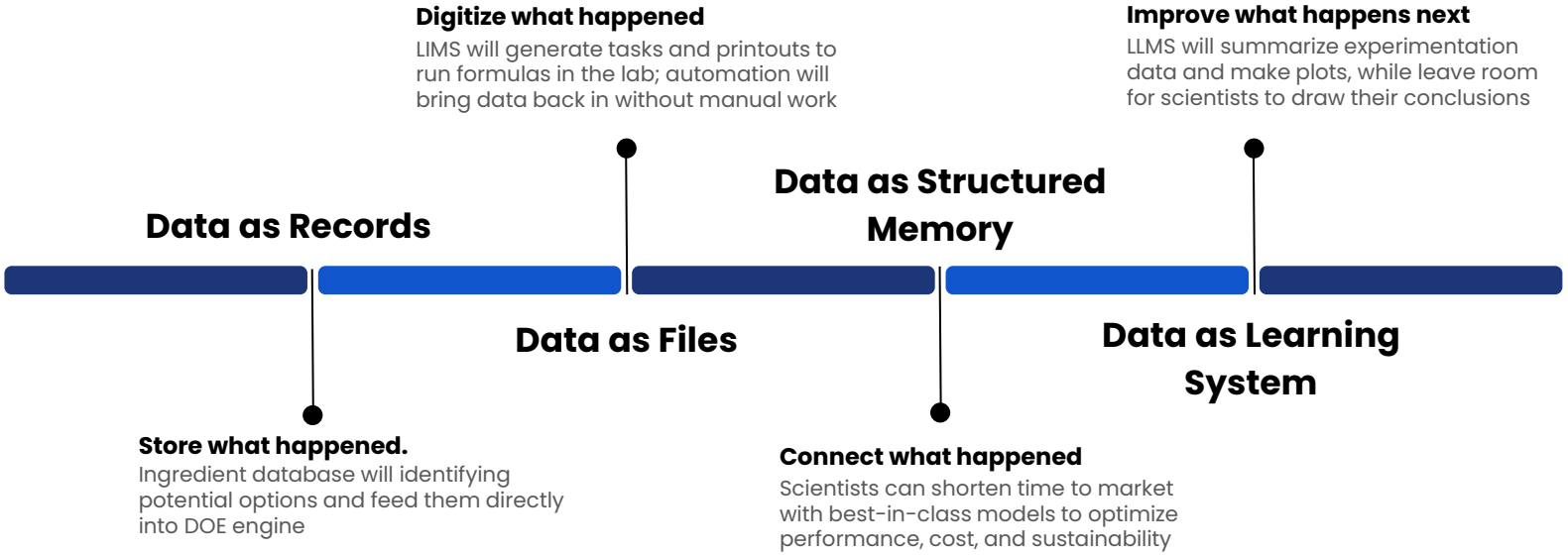
1. **Enabling diverse chemistries at scale, from concrete and sealants to adhesives and coatings**

2. **Connect labs across 18 Global Technology Centers, 100+ R&D facilities, 50+ countries**

"It's a strategic enabler that strengthens global alignment, builds trust by promoting transparency, and paves the way for a more agile, innovative, and sustainable product portfolio of the future."

–Luka Oblak | Team Lead Data Science, Sika

The Future of R&D Is Not More AI
It's Compounding Learning



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Thank You!

Feel free to connect with me on LinkedIn

Scan this to see Uncountable in action

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