

Agenda – day 1

Time	Duration	Session	Session Lead
9:00 AM	00:20	Welcome	Patrick Coulter
9:20 AM	00:15	Agenda review / minutes from last meeting	Dan Williams
9:35 AM	01:00	Software update / demonstration	Dan Williams
10:35 AM	00:15	Coffee break	
10:50 AM	00:30	Member update 1	PSA
11:20 AM	01:00	Technical session 1 - Simulation	Pete Cherns
12:20 PM	01:00	Lunch	
1:20 PM	00:25	State of Industry Report	Dan Williams
1:45 PM	00:30	Member update 2	Honeywell
2:15 PM	01:00	Technical session 2 - Data and Knowledge management	Dan Williams
3:15 PM	00:15	Coffee break	
3:30 PM	00:30	Member update 3	GM
4:00 PM	01:00	Technical session 3 - PLM integration	Arthur Fairfull
5:00 PM		Adjourn	
7:00 PM		Consortium Dinner - Walton Hall, Directors' Suite	

CONFIDENTIAL



Technical Session 2 – Data and Knowledge Management

Dan Williams



GRANTA
MATERIAL INTELLIGENCE

www.grantadesign.com



Agenda vote

Data management	Automating workflows	T4	5
Materials approval	Approval workflows	T4	5
Materials engineering	Capturing knowledge and expertise	T2	4
Simulation	Data provision for simulation	T1	4
Selection & specification	Materials selection / recommendation tools	T5	4
IT infrastructure	Global synchronization	T2	3
Data management	Collection of legacy data	T2	3
Simulation	Shared exporter development within AutoMatC	Tech proj review	3
Selection & specification	PLM integration	T3	3
IT infrastructure	Data security	T2	2
Data model	Standard schema for adhesives/lubricants	Tech proj review	2
Data model	Standard schema for fabric materials	Tech proj review	2
Data management	Collection of future data	T2	2
Data management	Standardization of data	T2	2
Selection & specification	CAD integration	T3	2
IT infrastructure	Logging user activity	Software update	1
Data model	Standard schemas for wear/tribology		1
Data model	Standard schema for lightweight alloys	Tech proj review	1
Materials approval	Using GRANTA MI across the supply chain		1
other	Material data extraction from CAE model and comparison with database		1

CONFIDENTIAL



GRANTA

In this session

Area	Discussion topic	Session	Totals	GM	KSPG	PSA	JLR	HNY	
14	Materials engineering	Capturing knowledge and expertise	T2	4		x	X	x	X
3	IT infrastructure	Global synchronization	T2	3		x	X		X
10	Data management	Collection of legacy data	T2	3		x		x	X
2	IT infrastructure	Data security	T2	2		x	X		
11	Data management	Collection of future data	T2	2		x		x	
12	Data management	Standardization of data	T2	2	X	x			

- Knowledge management
- Synchronization update
- Round table:
 - Why did you vote for these items?
 - How can AutoMatC help?
 - What are the challenges in these areas?

CONFIDENTIAL



GRANTA

Definition – Knowledge Management

Knowledge management (KM) is the process of **capturing, developing, sharing, and effectively using** organizational **knowledge**. It refers to a multi-disciplined approach to **achieving organisational objectives** by making the best use of **knowledge**.



Materials Knowledge



- **Knowledge scattered in spreadsheets, databases, hard copy, file systems...**
- 'Tacit' and 'explicit'
- **Tribal knowledge – at risk when people leave/retire**
- **No systematic access control, security, versioning**
- Often qualitative: behavior, processing, joining, surface technologies, procedures, best practices, experience



Images courtesy Jeff Sickmeier, RR

What is materials knowledge?

RESEARCH



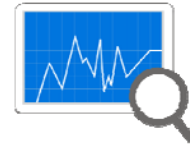
DESIGN



PRODUCTION



IN-SERVICE & END-OF-LIFE



* Some examples of non-numeric or non-structured data

Materials R&D

- Testing
- Characterization
- **Images**
- **Documents**
- **Video**
- Statistical analysis
- Reports
- Certification

Decision support data

- Certified design data
- Reference data (Properties, cost, eco)
- **Selection "rules"**
- **Tribal knowledge**
- **Experience**
- **Lessons learnt**
- **"Where Used"**
- Purchasing specs
- **Preferred materials**
- Restricted substances

Materials QA

- Batch testing
- SPC data
- Comparison with specs
- Process improvement
- **Supplier ratings**

Materials performance

- Failure reports
- **End user experiences**
- In-service testing
- **Empirical knowledge**
- Materials substitution
- Cost reduction
- Materials aging
- Recycling and disposal

CONFIDENTIAL



Main themes

1. Knowledge formats
2. Knowledge processing: capture, import, share, export
3. Retrieval: searching, keywords, linking, semantics...
4. Retrieval mechanisms – apps, etc
5. Use cases

CONFIDENTIAL



In this session

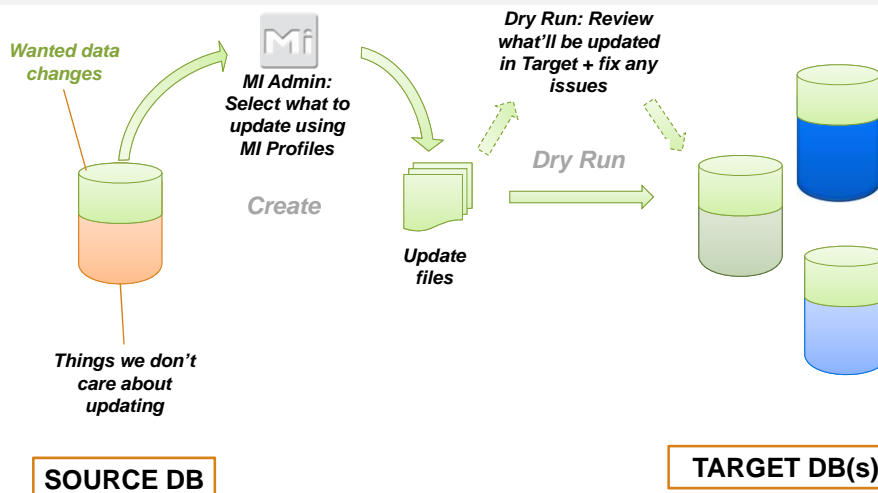
Area	Discussion topic	Session	Totals	GM	KSPG	PSA	JLR	HNY
14	Materials engineering	Capturing knowledge and expertise	T2	4	x	X	x	X
3	IT infrastructure	Global synchronization	T2	3	x	X		X
10	Data management	Collection of legacy data	T2	3	x		x	X
2	IT infrastructure	Data security	T2	2	x	X		
11	Data management	Collection of future data	T2	2		x	x	
12	Data management	Standardization of data	T2	2	X	x		

- Knowledge management
- Synchronization update
- Round table:
 - Why did you vote for these items?
 - How can AutoMatIC help?
 - What are the challenges in these areas?

CONFIDENTIAL



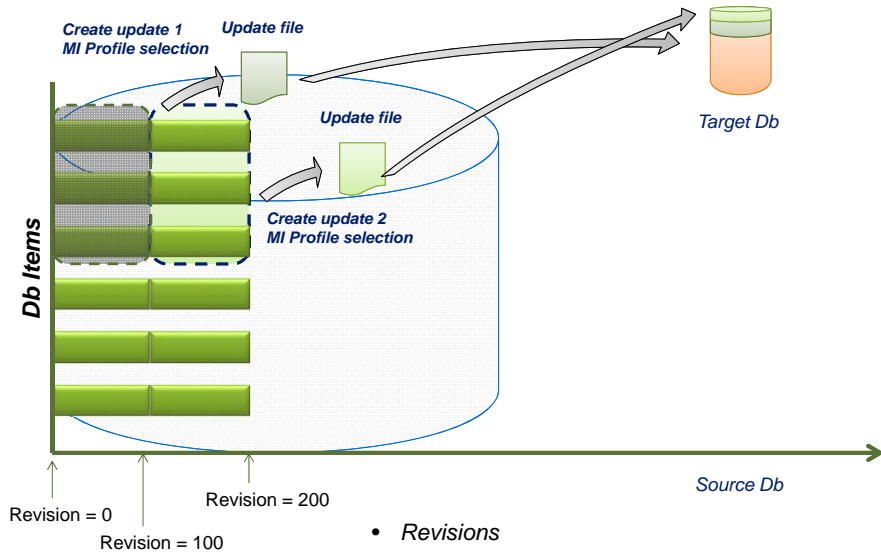
Synchronisation Workflow



CONFIDENTIAL



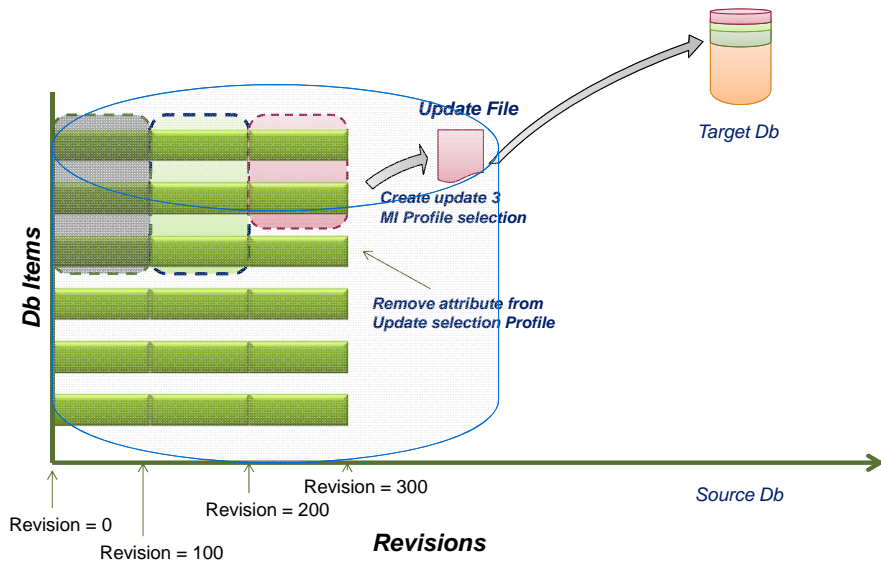
Update Selection and Tracking



CONFIDENTIAL



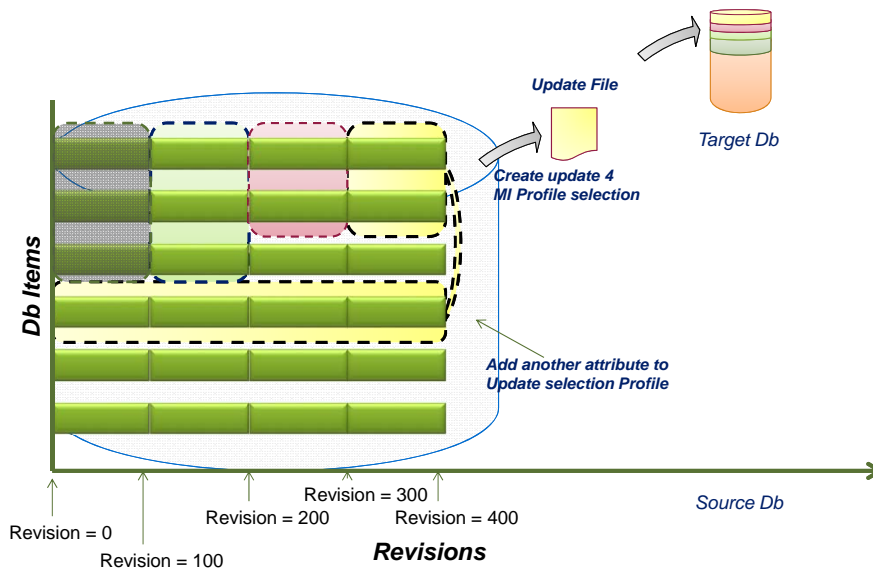
Update Selection and Tracking



CONFIDENTIAL



Update Selection and Tracking



CONFIDENTIAL



In this session

Area	Discussion topic	Session	Totals	GM	KSPG	PSA	JLR	HNY
14	Materials engineering	Capturing knowledge and expertise	T2	4	x	X	x	X
3	IT infrastructure	Global synchronization	T2	3	x	X		X
10	Data management	Collection of legacy data	T2	3	x		x	X
2	IT infrastructure	Data security	T2	2	x	X		
11	Data management	Collection of future data	T2	2	x		x	
12	Data management	Standardization of data	T2	2	X	x		

- Knowledge management
- Synchronization update
- Round table:
 - Why did you vote for these items?
 - How can AutoMatIC help?
 - What are the challenges in these areas?

CONFIDENTIAL

