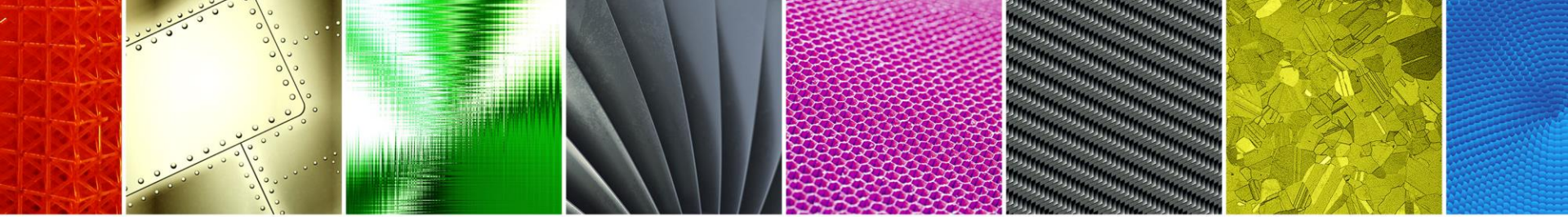


# AutoMatIC Member Update:
# Honeywell Turbo Technologies
# Martin Rust

2nd AutoMatIC Meeting Hosted by JLR, Heritage Motor Centre, Gaydon, UK

21st/22rd October, 2015

GRANTA
MATERIAL INTELLIGENCE

www.grantadesign.com

# GUIDANCE NOTES

- Implementation summary
  - Honeywell Aerospace data import schema is being modified to suit HTT (Honeywell Turbo Technologies) materials requirements. Testing of import process underway using sample data sets.
- AutoMatIC roadmap projects
  - TMF and creep/fatigue interaction is a topic of interest—how are others handling this type of test data and modelling?
- Your say
  - See above
- Business case and case studies information
  - Honeywell Aerospace's commitment to GRANTA (thru MDMC) has pulled the much smaller HTT (now part of Aerospace organization) into the plan

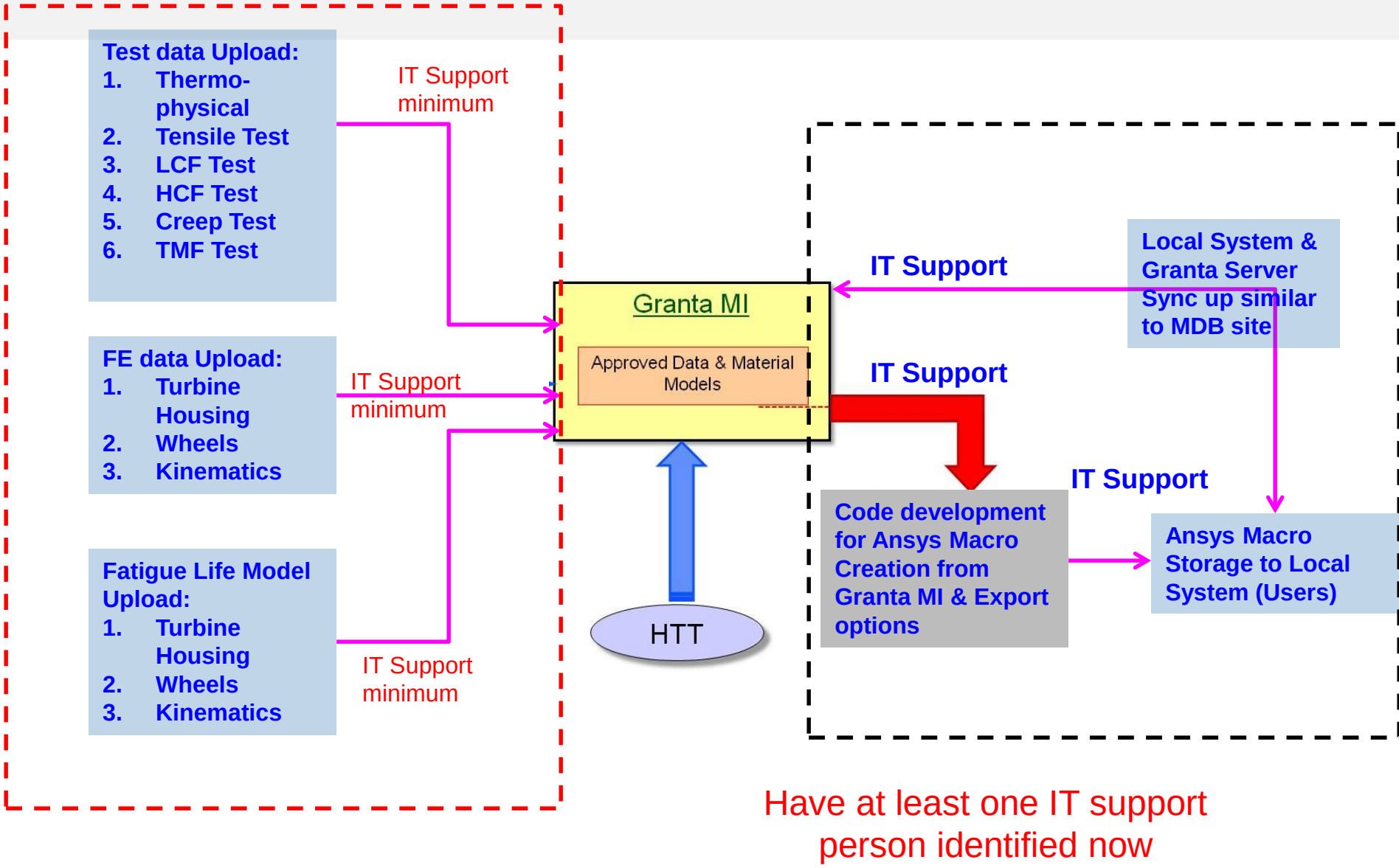
***Bottom line: not a great deal of progress since the April, 2015 meeting***

# Implementation summary

- What is the structure of your implementation:
  - Currently developing one COTS database
  - Servers:  one QA server for development, one for Production
  - Users
    - Read only ~ 25 to 50
    - Edit ~ 3
    - Admin ~ 3 approved, 3 more trained but not yet authorized
- What will the final system look like?
  - Primary users are Structures and Aero engineers using ANSYS WB & Classic, Product & Materials Engineers will access for specific material data?
  - ANSYS Classic will be used with modified versions of material import macros but transitioning to WB over next few years
  - HTT as a whole is currently largely unaware of GRANTA
- How close are you to this?
  - Schema still under development, need to train admins, load existing data (Q4, '15), rollout and train users—Beta testing in Q1, '16, full rollout in 2016

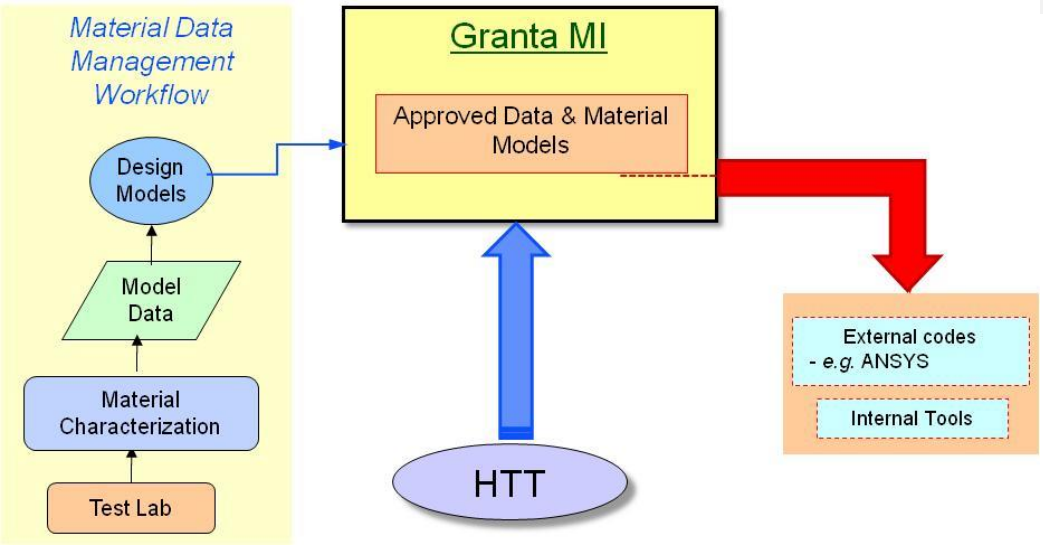
***Progress is moving slowly because of other company priorities***

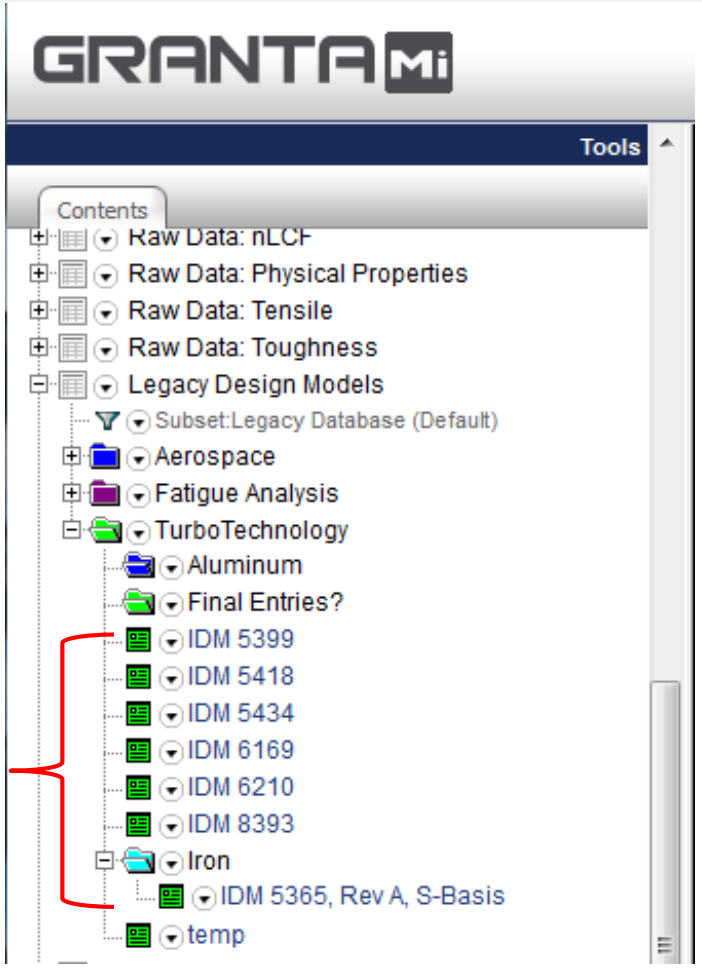
# HTT Granta MI Database - Flowchart




Have at least one IT support person identified now

# HTT Materials on Granta MI (qgranta)




- **HTT Material database work flow in Granta MI**
- **Working on migrating all existing material data and models into Granta MI**
- **Adding schema for HTT specific material modes**

**Some additional entries**

***Some progress achieved since the April, 2015 meeting***

# AutoMatIC roadmap projects

- Which roadmap projects discussed at this and previous AutoMatIC meetings would you like to support:
  - Top Agenda Poll items:
    - Synchronizing data globally (US, Europe, Asia, India,…)
    - Logging & reporting of user identity
    - Standard schema for wear/tribology
    - Materials cards:  managing or generating
    - Tools for generating materials cards from test data
  - Why have you voted for these?
    - Synchronization is a big deal for us because we are so global
    - We have a lot of data in different formats scattered around the world on harddrives—ease of loading in this data by multiple people will be a challenge & we must be able to output to our existing tools
  - How will they help you?
  - Why should others be interested in them?

***No change since the April, 2015 meeting***

# Your say

- If you had one message or question for the other members of the consortium, what would it be?
  - How do you manage your data inflow—who & how do you vet it and approve it for design use?
- If you had one message for Granta, what would it be?
  - Roadmaps are great for keeping focused on long term improvements.
  - Keep at least one subcommittee moving on a quick project for short-term victories.

***No change since the April, 2015 meeting***

# Business case information

- Why do you use the software?
  - All analysts must use the same properties every time.
  - Cross-site support requires a consistent processes and data.
  - Traceability & Transparency
- What do you get from the AutoMatIC?
  - Confirmation that our ideas can work.
  - New ideas on what we might do in the future.
- What ROI arguments do you rely on?
  - Most beneficial: improved access to the existing data, including its pedigree & avoid potential loss

***No change since the April, 2015 meeting***

# Looking ahead

- What would you like to change?
  - Looking 6 months ahead
    - Have our common data loaded into MI
    - Our key users trained and starting to use MI
  - Looking 2 years ahead
    - MI is the established HTT material database
    - MI able to handle very large database files (eg, dynamic stress/strain curve raw data at high sampling rates)
  - Looking 3 years ahead
    - All our material database needs satisfied with an easy to learn and use MI interface

***No change since the April, 2015 meeting***

# Case studies

- Do you have an example you can share?

We haven't progressed far enough yet in HTT with our implementation to provide an example case study

# Summary

- Your number one issue to put for discussion and feedback with other members
  - How are others handling validation/approval of new data?
- Your top three other issues
  - Create an admin role that cannot see the data— this issue discussed at MDMC meeting in Aug, 2015 attended by Honeywell Aerospace
  - Synchronization of the data (ie, master schema that could be used to update all other databases)—some capability exists but we haven't had time to try it yet.
  - Federation, ie have the ability to connect separate databases to that values (eg from Materials Universe) populate the central design properties database. Continues to be a key issue for us.
- Your top three smaller changes you would like to the software or tools
  - things that seem easy to do, but would make a big difference