

PipeHawk plc
Underground Intelligence



QM Systems & Thomson Engineering Design
AGM 22nd December 2022

Agenda:

- QM Systems
 - Reflection 2021/22 FY
 - Continued Effects of Covid Pandemic
 - New Facilities
 - Objectives 2022/23 FY
 - Projects
 - Contract Manufacture
- Thomson Engineering Design (TED)
 - Reflection on 2021/22 FY
 - New Facilities
 - Objectives for 2022/23 FY
 - Value Streams
 - Contract Manufacturing
 - Bespoke Projects Focus



Innovation in Automation

Reflection on 2021/22 FY

- A challenging year
 - More severely impacted by Covid-19 than previous FY combined with Russian invasion of Ukraine
 - Delays to project awards
 - Materials shortages causing delay to project deliveries
 - Final result does not reflect true progress
 - Rebalancing projects
 - Expansion into contract manufacturing
 - Moved into new facility
 - Significant cost associated with move to new facility on Hartlebury Trading Estate
 - c£750k outlay to get into the new facility
 - Majority of this self funded
 - Improvement in outlook 4th Quarter of FY
 - Order receipts improved
 - Too late in the FY to make a substantial difference
 - Significant orderbook carryover into 2022/23 FY

Continued Impact of Covid-19 Pandemic

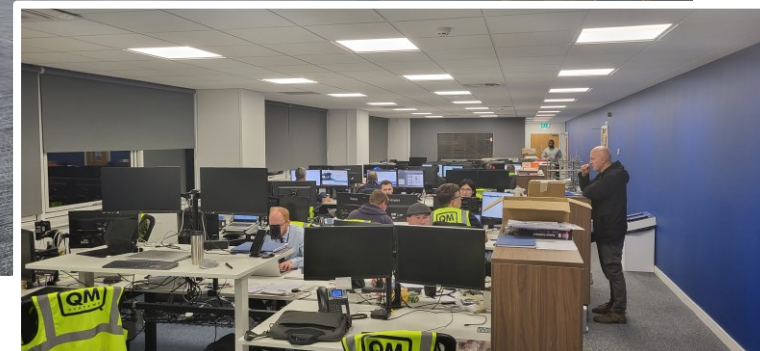
- Covid-19 is still with us
 - Stigma attached to Covid-19
 - Significant increase in other illnesses (lack of immunity or immunity waning)
 - Understandably some trepidation remains with colleagues
- Covid-19 effect is reducing
 - Most colleagues have received vaccination
 - Virus is milder and shorter lived in most cases
 - World is opening up
- Orderbook and outlook vastly improved
 - Clients appear to be placing orders again without significant delay
 - We have re-aligned our client portfolio significantly during the last 12-18 months
 - Order intake 2022/23 FY to date c £4.3M
 - Short term order pipeline is more buoyant

Welcome to the new and Improved QM !

- New facility with c 45,000sqft of manufacturing and office space
- Office space trebled compared to previous facility
- Manufacturing space increased 5 fold
- Investment of c£750k into our future
- Located on Worcestershire's largest Industrial estate
 - Premier location
 - Plenty of room for expansion
 - Great location, less than 10 minutes from M5 junction 5
- Move was completed in April 2022
- IT Infrastructure heavily upgraded
- 1GB dedicated lease lined providing super fast connectivity
- Factory space split between contract manufacturing and QM projects



Images of the facility



Objectives 2022/23 FY

- **Projects**

- Progress
 - 1st Semester will continue to be held back as new project work becomes established
 - 2nd Semester should see operations normalise as all departments become fully loaded
- Recruitment
 - Head count increase of 5 within Mechanical Design Department
 - Head count increase of 2 within Software Department
 - Head count increase of 1 within Electrical Engineering Department
 - Head count increase of 4 within Build Team
 - Head count increase of 2 within Project Team
 - Head count increase of 1 within Business Development Team
 - Restructure of finance team with addition of new Finance Director
 - Quality Manager joining January 2023
 - More to come...
- Different mix of projects
 - Growth and stability
 - No industry makes up more than 25% of QM's turnover
 - Strong growth within Medical Devices industry
 - Reduced risk with careful selection of projects
 - QM are good at many things but not masters of everything
 - Drive to increase project size

Stability with supply

- Keep options open
- Build on partnerships where regular component supplies can be scheduled
- Build partnerships with core suppliers

Objectives 2022/23 FY

- **Contract Manufacturing**

- Establish the business units
 - Marine Diesel Outboard Motor (SOP est June 2023)
 - Ventive Home Intelligent Heat Pump (SOP est Q4 2023)
 - Medical Vial Filling and Capping Business Unit (SOP est May 2023)
- QM have been successful in securing 3 contract manufacturing opportunities to date
- Contract manufacturing brings stable repeat business
- Lower risk with little to no design responsibility
 - Our role is to provide the production and test eqpt., people and to build the products to the client's specification
- Opportunity for rapid growth
- Stability to cashflow
- Scalable
- A natural extension to the services that we offer through our project business unit
- There is a proven requirement for these services
- Currently around 50% of our new facility is already set aside for the business units identified above
- Will bring approximately 30 new employee positions to QM and Worcestershire in 2023
- QM in discussion for further contract manufacturing contracts

Diesel Marine Outboard Motor

The manufacturing cell is ready to go, SOP Q3 2023 CY

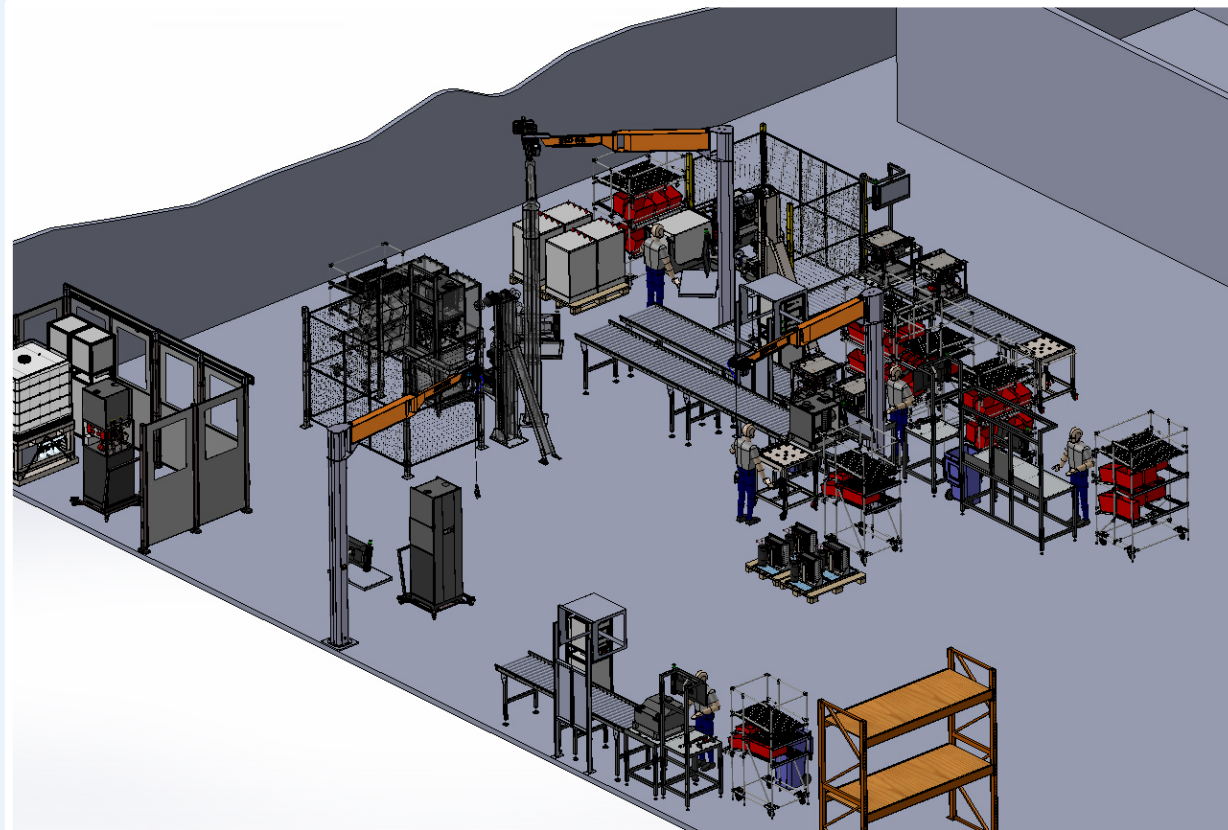
Trial builds commence in January 2023 and continue through to June 2023

Engine test cell to be installed Q1 2023, every engine produced will undergo 'hot test'



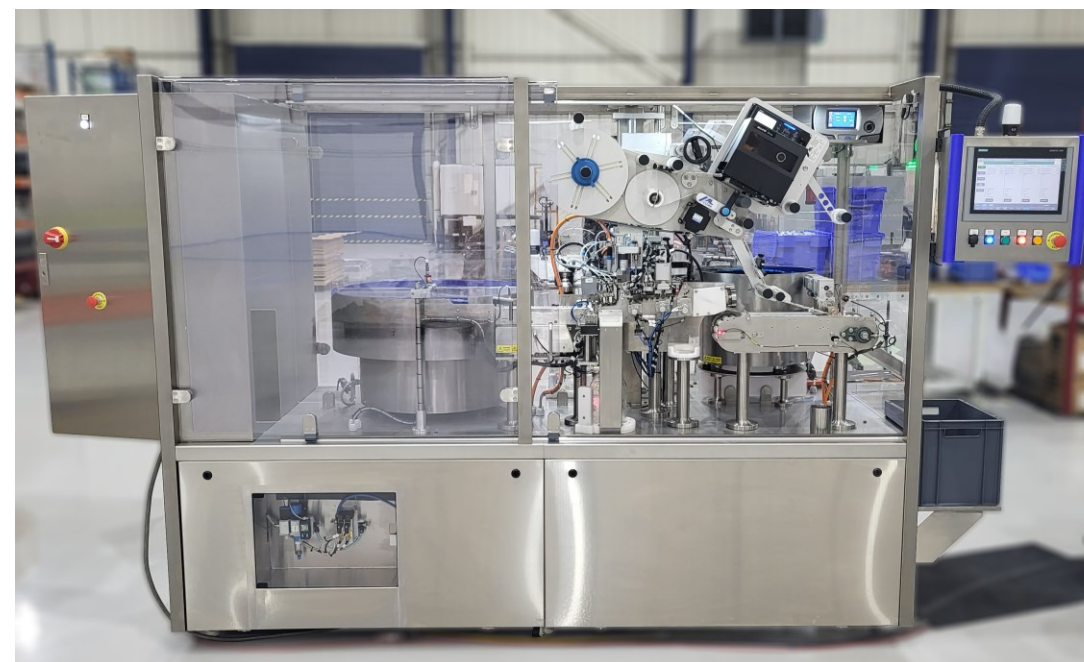
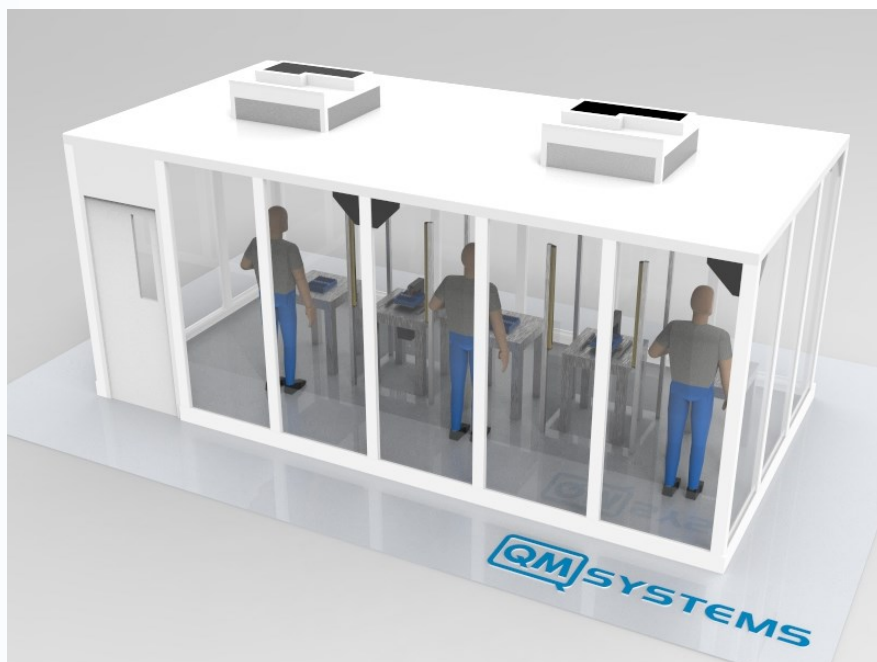
Ventive Home System

- Intelligent whole house ventilation, heating, cooling and hot water for domestic homes
- SOP Q4 2023 CY
- Pre production units May 2023
- Production line, test systems and MES all designed and manufactured by QM Systems project team
- Facility will initially occupy c11,000 sqft manufacturing space covering assembly, test, stores and goods out.



Medical Vial Filling

- Vial filling application for a medical devices project aligned to small platform PCR testing
- SOP low volume May 2023, volume expected to increase to higher volumes from end 2023 onwards
- QM Systems will provide a Clean Room within the current Hartlebury facility
- Clean Room populated with QM Systems designed and manufactured automated filling and capping systems combined with QM's own Proprietary MES
- Facility will initially occupy c1,000 sqft manufacturing space covering assembly, test, stores and goods out.





Reflection on 2021/22 FY

- A progressive year
 - Increased revenue
 - Revenue up by c£0.2M to c£1.4M
 - Small loss, break even after tax
 - Caused by raw material increases skewing cost model
 - Cost model modified, core products re-costed
 - New facilities functional
 - Trebling of factory space
 - Retained original facility for redevelopment and expansion
 - Operational expansion
 - Significant development of key operational activities
 - Development of new Risk and H&S procedures aligned to new site
 - Expansion of manufacturing team
 - Additional machinists, fabricators and assembly technicians
 - Expansion of technical team
 - Addition of factory based design engineer
 - Increase in team leader function and training
 - Expansion of value stream categories
 - Opening doors to new opportunities
 - Growth in larger projects
 - Growth in higher volume business

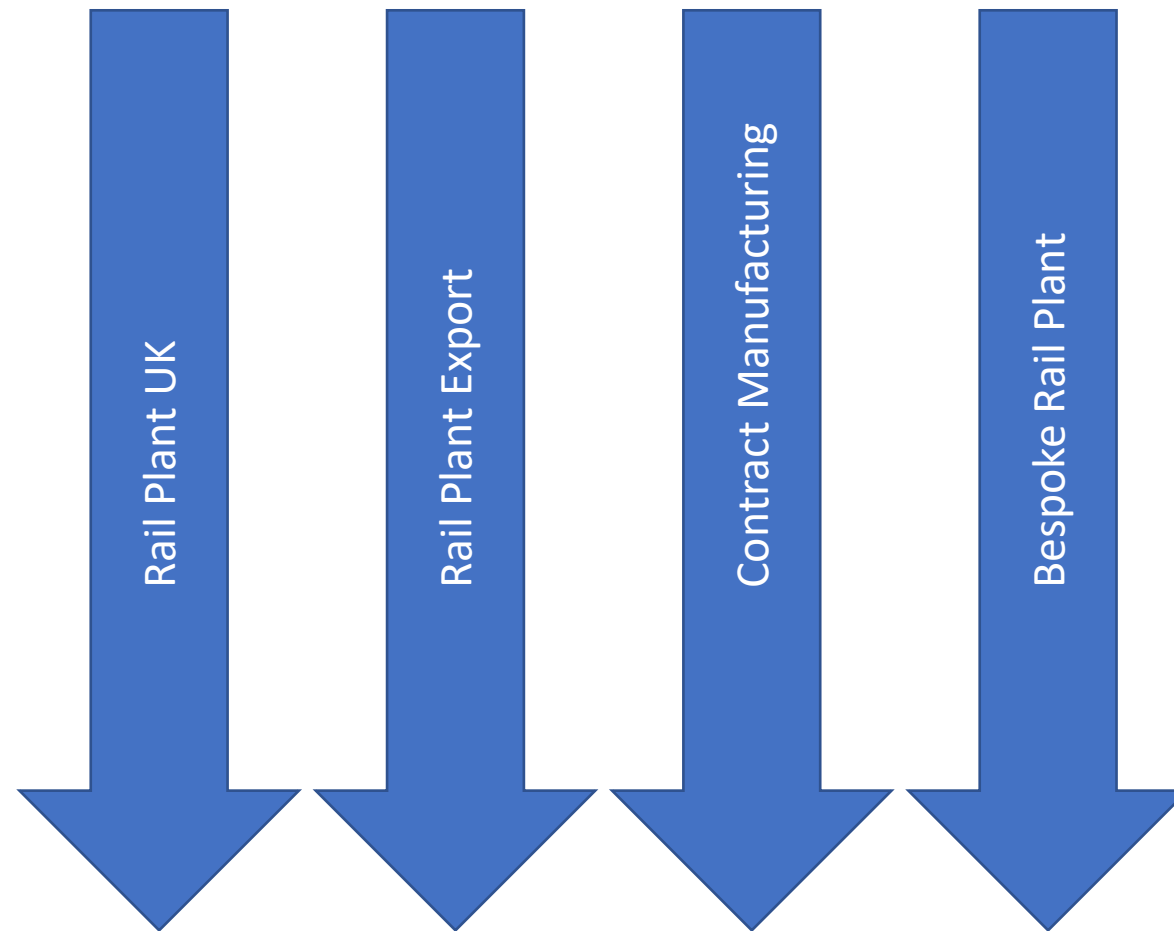


New facility new fully functional:

- C 19,000 Sq ft facility
- Approx 3500 Sq Ft office split across two units
- Final assembly and machining teams now relocated
- Fabrication team will relocate in Qtr 1 2023

Objectives 2022/23 FY

- Increase our 'value streams' from two to four



Increase added value utilising existing skills

Rail Plant Export

- Contract in place with Unipart Rail for Global Export Supply of TED Rail Equipment
- Access to the distribution network of a £200 Million turnover company (part of a c£1Bn turnover Group)
- Sales and technical presence globally
- Established rail brand supplying rolling stock, rolling stock spares, signalling and safety equipment
- Unipart Rail focus core target growth in rail plant and infrastructure
 - TED provide ready made products to compliment this strategy
 - Full access to TED's product catalogue
- Access to Unipart's marketing machine
 - A focused marketing strategy and campaign on signing the distribution agreement
 - Development of existing partnerships to sell our products as turn key packages with machine suppliers.
 - Access to all the key trade shows globally – Innotrans, AusRail, Arema Rail, Rail Live etc...

Contract Manufacturing

- Develop business partnership with key rail sector equipment provider in the UK
 - Mule conversions, trailers, Toyota Hilux conversions.
 - Once established potential of upwards of 10 kits each per month
 - Kit prices between £10k and £20k dependent on product
- Develop partnerships outside of rail sector
 - Contract machining and fabrication
 - Target clients that have similarly challenging componentry to that of TED
 - Provides a base line for machining and fabrication departments
 - Increased headcount brings increased throughput
 - Scalable
 - Funds access to additional equipment
- Benefits
 - Regular, repeatable, forecastable income and profit
 - Potential for significant growth
 - Stability
 - Improved cash

Larger Scale Project Developments 2022/23

Ballast Broom

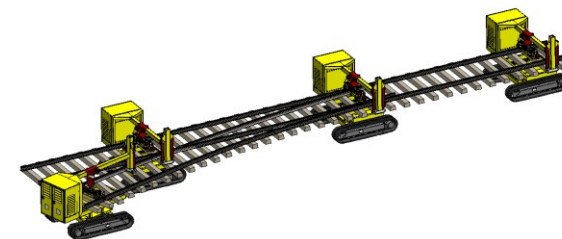
- Reduce risk of respirable stone particles which can cause lung cancer
- Particles become airborne when moving and handling ballast
- Existing systems suffer high levels of wear
 - due to overloading caused by the machines not keeping up with changing working practices
- Existing designs do not enable dust suppression equipment to be retro-fitted
- TED is designing a new machine from the ground up to meet modern requirements
- The new machine will:
 - incorporate a twin cyclone dust extraction system which is unique to the industry
 - Incorporate a unique ballast lifting wheel
 - significantly reduce the wear on the ballast broom itself



Larger Scale Project Developments 2022/23

Track Panel Handler

- Existing machines gantry-based
 - Wider than track panel being handled
 - Incompatible with obstructions like parapets, platforms, narrow spaces
 - Incompatible with tunnels
- Innovation
 - Carries load above caterpillar tracks
 - Machine narrower than sleeper length
 - Leg crane arrangement to elevate, load and unload panels
 - Design allows multiple machines to be deployed to handle long and heavy panels
 - Exchangeable power module
 - Upgrade to future Electric or Hydrogen power
 - Accepts wide range of attachments
 - Wide range of possible functions including
 - Panel handling
 - Cable handling
 - Points and signalling equipment installation
 - General purpose crane duties
 - Rail delivery, exchange and install



Thanks for your time