Efficient Modifications

More 4 Less - modifications re-imagined
Transforming to a new way of working

Industry challenges, and a rising cost base, has exerted significant pressure on oil and gas operations. What the industry needs is a new way of working, of delivering more work for less cost: More 4 Less.

The immediate reaction from the industry was to drive cost out of the supply chain through tactical cost avoidance. Implementing our More 4 Less methodology focuses on efficiency, challenging assumptions and driving new ways of thinking. As an industry we need to move quickly towards a new way of working with simple, cost efficient solutions.

That is why we have transformed the way we deliver modifications.

Our journey to date

- **Late 2013**
  - Oil price at over $100 per barrel

- **Past**
  - Traditional estimating with single norm set - unrestricted deliverable sets
  - “Major project” focused procurement process
  - Single delivery model for all scope types
  - Highly detailed deliverable / drawing content
  - Standard single workpack format

- **Early 2014**
  - Listened to our customers
  - Established best practise
  - Planned for sustainable change

- **Oct 2014**
  - Acquisition of Scopus Engineering, proven provider of lean engineering to the international oil and gas market

- **Present**
  - Reduced contract support costs
  - Reduced contractor rates
  - Using scalable norm sets (mods, minor mods & repair orders)
  - Scopus Engineering embedded for fast track repair orders
  - Reduced deliverable choice based on scope categorisation
  - Using scalable workpacks
  - Less deliverables required for procurement
  - Simplified drawing content while maintaining engineering integrity
  - Refined upfront estimating preparation for content inclusion (i.e. to agree the minimum requirements)
Efficient Modifications

30% - 60% cost saving for modifications with accelerated delivery times of more than 50%.

Maximising efficiency

Amec Foster Wheeler’s strategy for delivering Efficient Modifications is straightforward and breaks modifications down into three distinct categories; Modifications, Minor Modifications and Repair Orders.

Efficient Modifications is based on the ability to flex our approach with the risk and complexity of each category, which have scalable norms, processes and deliverables as depicted in the graphic below.

No compromise on safety

‘More 4 Less’ is not about taking engineering shortcuts.

Efficient delivery is not about taking engineering shortcuts. Ensuring that all modifications are safely executed is integral to our Efficient Modifications methodology.

A key success factor is to improve the integrity of the asset by reducing the probability of process related incidents. Our safety processes are scaled in line with the applicable modification risk profile.

A strong HSSE (Health, Safety, Security and the Environment) culture is key to our Efficient Modifications delivery model and our Beyond Zero programme is integral to that culture. Beyond Zero contains tools, techniques and standards that help us drive a refreshed HSSE agenda, one that will stand the test of time and deliver world class protection from harm; for our people, our assets, our environment and our customers.
Delivering Efficient Modifications is about thinking differently and cutting costs with smart, simple solutions.

Looking at assets with a new perspective, thinking differently.
Delivery of Efficient Modifications

Our Efficient Modifications process focuses on people, process and performance management:

► **People:** One team working towards aligned measurable objectives with an accountable, collaborative culture of continuous improvement and challenging the conventional way of working with no compromise to safety or integrity

► **Process:** Fit for purpose processes for the delivery of modifications, where process steps, assurance activities and approvals are scaled in line with the risk and complexity of the modification

► **Performance:** A clear performance management system which is visible to all levels of the organisation, building an aligned understanding of objectives and how we are performing against them

At every stage Efficient Modifications focuses exclusively on deliverables that are essential to either; Build it, Buy it or Assure it – cutting out waste and non-value adding work.

The results:

30% - 60% savings across all modifications

- **45%** savings* for minor modifications
- **60%** savings* for repair orders
- **20%** reduction in hourly costs
- **8 week** schedule improvement
- **50%** cost reduction in engineering costs
- **30%** savings* for modifications
- **40%** reduction in engineering to construction hours ratio

*over traditional approach
Scopus Engineering has taken a bottom-up approach to the delivery of cost effective repair orders. We provide quality engineering, fast. Simple, fit-for-purpose, safe, quality scopes at a lump-sum price. Our process empowers high quality design and engineering staff with multidiscipline skills, thereby significantly reducing interfaces, schedules and costs.

**People**

People are crucial to the delivery of Efficient Modifications. Developing and supporting the right behaviours, continuously challenging solutions and working with our customers to deliver an integrated, one team approach. Our people are collaborative, smart and accountable.

**Integrated contract team**

Our integrated contract team works collaboratively with our customers to challenge assumptions, promote innovation and to deliver on aligned objectives.

**Flexible modifications team**

Flexible access to modifications experts allows specialist resources to be shared between contracts efficiently, whilst maintaining expertise, sharing best practice and reducing overheads.

**Scopus**

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**HVEC (High Value Execution Centre)**

Based in Chennai in India, our high value execution centre allows us to provide work share capacity and highly skilled engineering expertise for our customers, working as part of our integrated services offering. Our Chennai office was established in 1998 and supports all Amec Foster Wheeler modification contracts. The model is tried and tested.
Our Efficient Modifications process is innovative, simple and focused, as outlined below. We evaluate the scopes to make sure they are value adding. Work is then either rejected, or categorised which drives how the scope is executed. All modifications go through three phases which flex with complexity:

- Initiation and prioritisation (including categorisation)
- Engineering
- Construction and commissioning

Each category (Modification, Minor Modification and Repair Order) has a different delivery approach, including engineering norms, engineering assurance, commercial models, project controls (estimating, planning, and reporting), project management and all associated deliverables.
Amec Foster Wheeler has a proven track record in efficiently delivering contracts globally for our customers. We are confident that we will deliver enhanced efficiency for our customers and align our KPIs with our customers’ business drivers.

- **Spend less**: More value per hour of construction
- **Add value**: Execute highest value jobs, Eliminate low value jobs early in the process
- **Deliver safely**: No harm to people or the environment, Maintain and improve integrity of assets
- **On time**: Deliver when planned, Right first time
- **Deliver more**: Finish every job we start, More construction delivery for engineering output

*We only win when our customers do.*
Proven

Putting theory into practise

We have developed new, innovative ways of working and turning them into tangible improvements to benefit our customers. We are implementing Efficient Modifications across our portfolio and are achieving significant efficiency improvements as a result, at contract and job level.

30% - 60% efficiency savings for modifications.

- 30% savings* for modifications
- 45% savings* for minor modifications
- 60% savings* for repair orders
- 50% cost reduction in engineering costs
- 40% reduction in engineering to construction hours ratio
- 8 week schedule improvement
- 20% reduction in hourly costs

*over traditional approach

At a job level, the case studies below outline where implementing our Efficient Modifications process has delivered significant savings to our customers versus initial estimates on specific modification scopes.
Our key focus is to maximise asset value for our customers to overcome the challenge of operating efficiently in mature basins like the UK North Sea. Our methodology is about establishing aligned goals and working together to achieve them over time.
Amec Foster Wheeler designs, delivers and maintains strategic and complex assets for its customers across the global energy and related sectors.

With over 40,000 employees in more than 55 countries, the company operates across the whole of the oil and gas industry - from production through to refining, processing and distribution of derivative products - and in the mining, clean energy, power generation, pharma, environment and infrastructure markets.

Amec Foster Wheeler shares are publicly traded on the London Stock Exchange and its American Depositary Shares are traded on the New York Stock Exchange. Both trade under the ticker AMFW.

connected excellence in all we do

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