# Plexus Messenger

**Plexus solves complex networks of interdependency in the aerospace and defence industry**

PLEXUS

**Number 5**

**April 2014**

## Inside this issue:

## Plexus takes the lead in Interdependent Systems Management - ISM in Aerospace and Defence

Welcome to the latest edition of the Plexus Newsletter and the start of exciting times as Plexus rolls out major product enhancements. These position Plexus as the clear leader in managing the interdependencies in large, complex projects in aerospace and defence.

We are seeing a rapid increase in the roll-out of new Plexus projects in some of the largest aircraft and defence manufacturers, and the growing acceptance that Plexus delivers the only truly workable solution for managing these complex projects. As a result we are seeing more valuable feedback from our users and are planning to set up a User Group to enhance the Plexus user experience.

I would like to thank our customers for their valued support and look forward to welcoming more new Plexus users in the months ahead. Come and see us at Farnborough!

*Alasdair Pettigrew – Chief Executive*

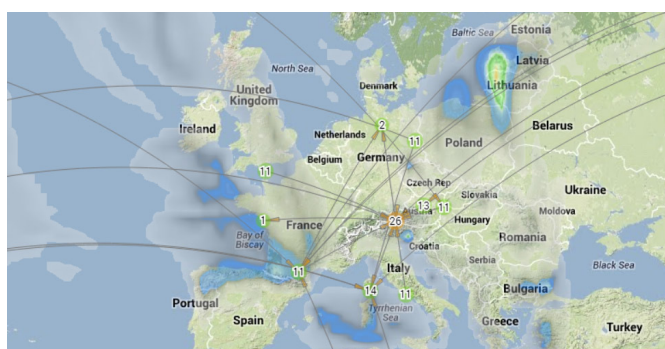Farnborough INTERNATIONAL AIRSHOW 14-20 JULY 2014

## Plexus Announces Release 5 with 'Value-Chain World Map'

We are pleased to announce Release 5 of Plexus, which includes the 'Value Chain World Map' feature, a major enhancement which provides visualisation of complete supply chains in the context of the world map.

This allows management decisions to be made immediately based on any geographical or geo-political criterion; whether it is to

speed up project design & development, reduce risk, minimise environmental impact or to react to a sudden disaster or political instability.

In complex supply chains in aerospace and defence, the lead supplier may have many prime-contractors, and hundreds of sub-contractors who each have their own tiers of suppliers. The total supply chain often extends to hundreds, or even thousands of manufacturing locations spread throughout the world.

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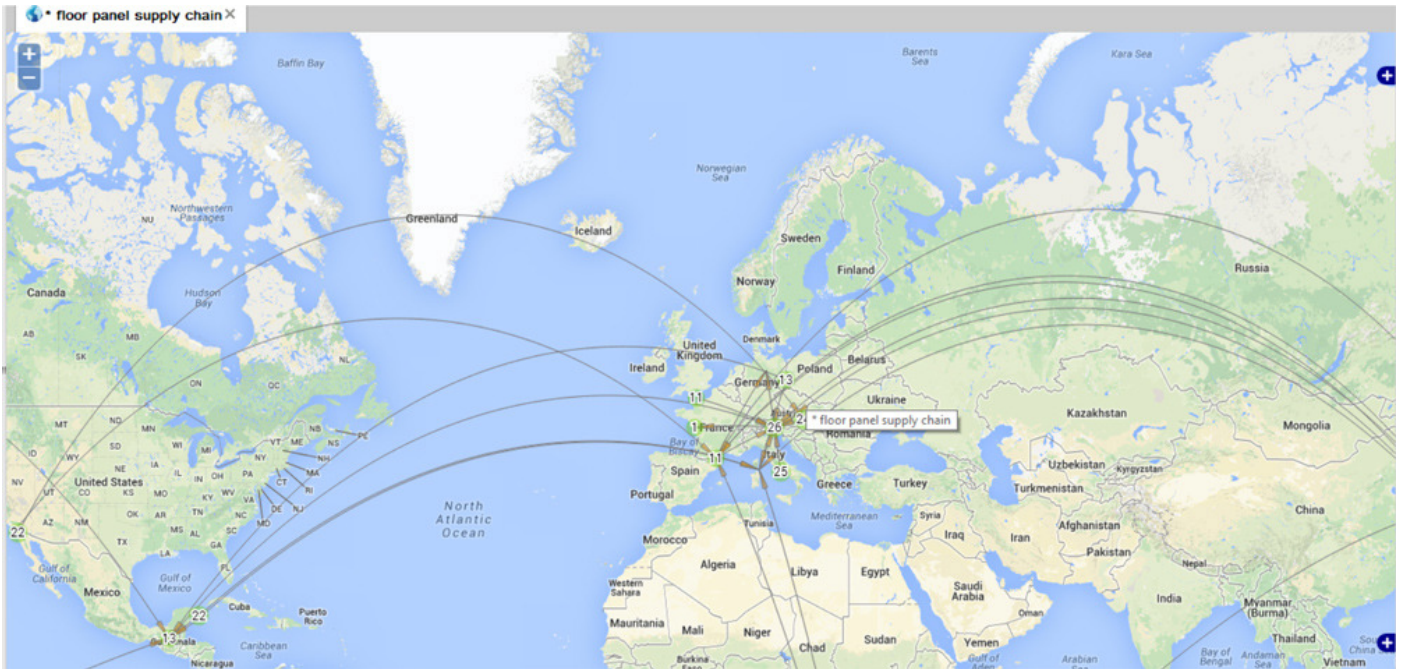
anybody to have a detailed knowledge of the complete supply chain, and many meetings are required, for example, to piece together the full impact of a disruption in a particular supplier or country.

The 'Value-Chain World Map' provides a complete picture of the entire value-chain,

feature, which allows users to prepare frequently run reports as a set of macros containing all of the process steps for running each report. For each scenario, these include all of the required model views, filters and displays etc. as a single macro, which can be run at the touch of a button, saving time and error in preparing valuable reports.

*"Typically there is too much complexity for anybody to have a detailed knowledge of the complete supply chain"*

Example: Supply chain map for a floor panel

showing supplier locations overlaid on a world map. Clicking on to a location drills down into more detail showing each plant that is making or supplying some part of the overall project. Further drill-down then allows complete analysis of the value-chain and linkages to other processes, components and sub-assemblies etc.

As a result, decision-makers have immediate visibility of an 'at-risk' part of the supply chain and are provided with all the information they need to react to the risk without delay – within hours, compared to days or weeks with traditional tools and methods. For a major aerospace or defence project this can save significant costs and reduce or avoid shipment delays.

Plexus Version 5 also features other enhancements, including Web-Plexus, which provides a web-browser client for the Plexus solution, thereby enabling easier and more flexible access from any device that can reach the secure Plexus server such as PC, laptop, iPad etc.   There is now a 'Reporting macro'

Alasdair Pettigrew, Chief Executive of Plexus Planning, said,  "This is a breakthrough release that establishes Plexus as the leading supplier for Interdependent Systems Management - ISM.  The Value-Chain Map provides a highly visual decision making tool that will be in much demand by leading aerospace and defence companies, and is particularly effective in initial systems design and disaster management."

## Cloud-based deployment for easier and faster implementation

Plexus is now available with a cloud-based deployment option that makes it easier and faster to implement, leading to quicker 'time-to-benefit'.

By hosting the Plexus Planning solution on a Cloud-server, users can easily access the

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## Cloud-based deployment for easier and faster implementation

solution through any simple networked client, allowing anytime, anywhere access from a PC, laptop or iPad etc without needing Plexus to be installed on that device.

All users will now get access to the latest version of Plexus without needing to do an upgrade; new versions are immediately available to all; and it is much quicker and easier for new users to evaluate and pilot Plexus and begin to realise the substantial business benefits to be gained.

Alasdair Pettigrew, Chief Executive of Plexus Planning, said, "Plexus is widely acclaimed by our knowledgeable and experienced users, who recognise the substantial benefits that can be gained in complex supply chains, systems engineering, processes and planning.

The easier deployment through the Cloud will allow Plexus to be rolled out quickly and more extensively throughout our users' projects & supply chains as well as enabling potential new users an easy entry to bring their engineering and supply chains under control."

*"….enabling potential new users an easy entry to bring their engineering and supply chains under control"*

## Plexus differentiators: The ONLY workable solution for large, complex projects

- **Vast scalability** – Most alternative solutions do not scale well. Visio and other "boxes and arrows" modelling tools are useful with only tens of nodes; any model with hundreds of nodes is normally unusable. Plexus can model very effectively in the *tens of thousands and even hundreds of thousands of nodes!*

- **Filtering, Summarising, Slicing and Dicing** – It is crucial to have capabilities in place to make sense of the vast networks that can very quickly and efficiently be modelled with Plexus. This is Plexus's other key differentiator over other possible solutions.

- **Ease of Use** – Plexus is highly visual and very easy to pick-up and use, unlike many other modelling tools.

- **Effective Collaboration** – Plexus is enabled with unique collaborative modelling capabilities that are robust and can work over any network and the internet.

- **Analytical** – Plexus is a network analysis thoroughbred – it's not just for pretty pictures!

- **Versatile** – Plexus can be configured for any business purpose that involves complexity

- **Outstanding I/O** – Plexus can economically import and export data between any system

- **Focus on YOUR business** - Our tool is specifically aimed at, and tailored to, Aerospace and Defence customers.

*"….effective modelling for tens of thousands and even hundreds of thousands of nodes!*

*……..wide ranging capabilities to make sense of vast networks"*

## Meet Plexus at the Farnborough International Airshow

Plexus Planning will be at the Farnborough International Airshow and we look forward to meeting everyone who wants to improve their business and manage their complex projects & supply chains. Come and meet us on Stand 1/B12B.

If you would like to pre-arrange a meeting with us at the show, then please contact Alasdair Pettigrew on +44 7711 850 102 or email Alasdair.Pettigrew@plexusplanning.com

# Interdependent Systems Management - ISM

Interdependent Systems Management is a new concept within the aerospace and defence industries and provides the process, method and toolset that enables producers to manage extremely large and complex projects with multiple tiers of interdependency.

The design of an aero-engine may include components and subassemblies manufactured in several different plants with subcontractors accounting for up to 80% of the total build.

The engine manufacturer is dependent on a complex value chain that comprises in-house and external suppliers; and it then has to co-ordinate and manage all of this interdependency, which can extend down to many tiers of sub-contractors.

The challenges become even more complex when this is extended to a complete aeroplane and the value chain is spread across the globe.
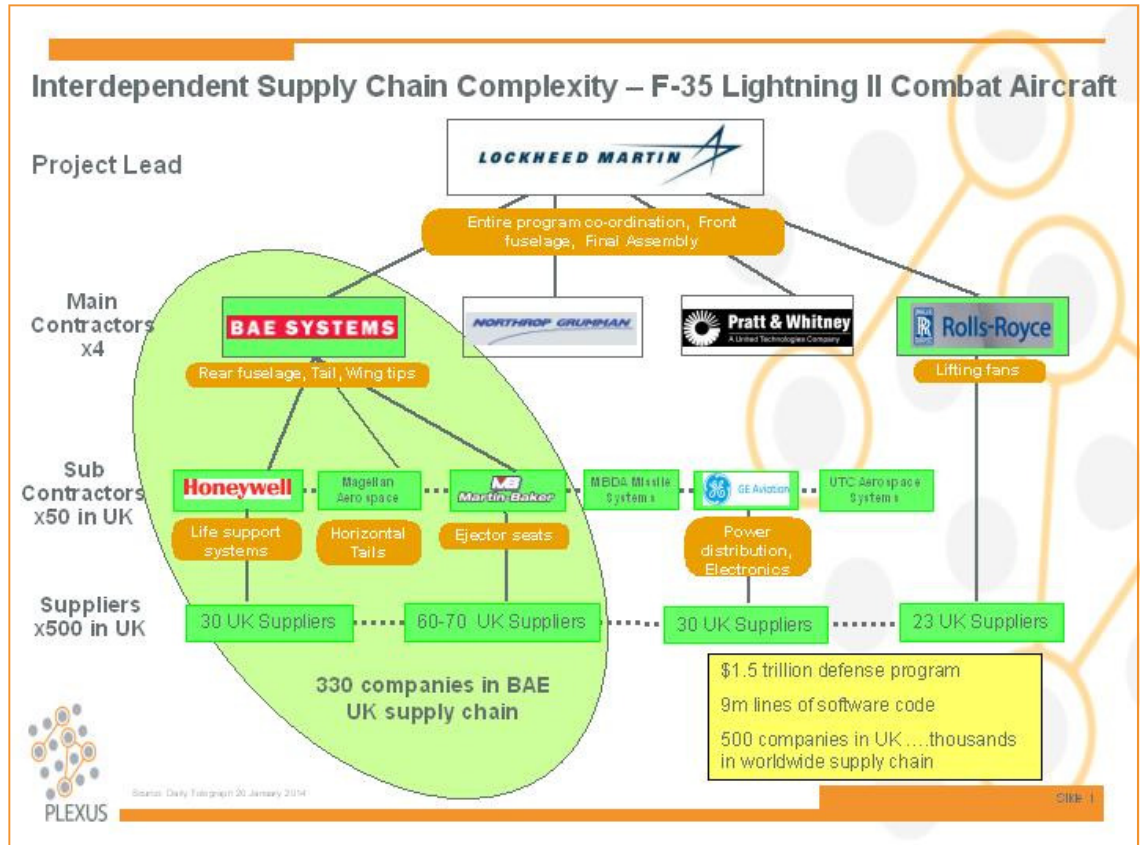
An example is the F-35 Lightning II combat aircraft made by Lockheed Martin.

including:

- Physical components and sub-assemblies

- Software and interfacing compatibilities

- Wiring and final assembly

- Validation & testing

- Upgrades and in-service enhancements

Plexus has the world lead in bringing Interdependent Systems Management solutions to market.

*"Plexus has the world lead in bringing Interdependent Systems Management solutions to market."*



Interdependent Supply Chain Complexity – F-35 Lightning II Combat Aircraft

The graphic shows the top five main contractors and highlights (in green) those parts of the programme that are made by UK based companies.

Even though this comprises only a small part of the whole programme, there are still around 500 suppliers in the UK. The entire programme depends on thousands of suppliers.

The goal of Interdependent Systems Management is to be able to map all of the interdependencies throughout an entire project, together with all of the value chain linkages, development processes and interfaces of complex systems; in order to provide a single point of control and management.

The interdependencies affect all areas of design, engineering, construction and assembly

Plexus takes data from a large number of existing sources together with additional data entered by subject matter experts and automatically generates an extended value chain map for the entire project.

This can be displayed on a world map showing geographic dependencies while further functions provide the ability to explore upstream and downstream dependencies, and use visual flow maps, excel charts, and tabulations to manage risk, understand the flow and prioritise engineering release, supplier development and lead-time reduction activities.

*"Plexus takes data from a large number of existing sources together with additional data …... and automatically generates an extended value chain map for the entire project. "*

## Plexus User Group

With the rapid growth in the use of Plexus in more and more projects, we feel it is now time to start a Plexus User Group. This will be a forum for all of our users to share experiences and exchange tips and comments. It will also provide the basis for user feedback to ensure that Plexus continues to grow in functionality to meet user requirements.

We would like your views on what you would like to see in the User Group and how this should be set up.

*Please provide your comments to your normal Plexus contact or send an email to the editor.*

## Secretary of State for Business visits Plexus

Plexus was recently honoured by a visit from Vince Cable, the UK Government's Secretary of State for Business, to our offices in the Engine Shed in Bristol.

He was very interested in the groundbreaking Plexus solution and is seen in the photograph enjoying a joke from Alasdair Pettigrew, who suggested that the government may want to look at Plexus to manage the interdependencies of government policy, and help avoid unintended consequences!



*In the photograph: Ian Poccachard (left); Alasdair Pettigrew (centre); Vince Cable (right)*

## Contact Us

**Head Office**

Plexus Planning Limited
Engine Shed,
Station Approach,
Temple Meads,
Bristol, BS1 6QH
United Kingdom

Telephone: +44 (0)117 911 4762

Fax: +44 (0)117 911 4314

Email: info@plexusplanning.com

**North America**

Email: rob.smith@plexusplanning.com

Telephone: +1 239 247 5865

**www.plexusplanning.com**

www.linkedin.com/company/plexus-planning

www.twitter.com/PlexusPlanning

## Feedback

Please send any comments or suggestions to: richard.wightman@plexusplanning.com