



# Welcome To Lex<sup>X</sup> Defence

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*Digital Intelligence for Optimised Maintenance*

LEX<sup>X</sup>  
DEFENCE

# The Challenge for Defence Operators

*To optimise the availability and efficiency of Defence critical assets*

Asset unserviceability results in:



Assets Non-Operational



National Security Risk



Lack of Mission Readiness

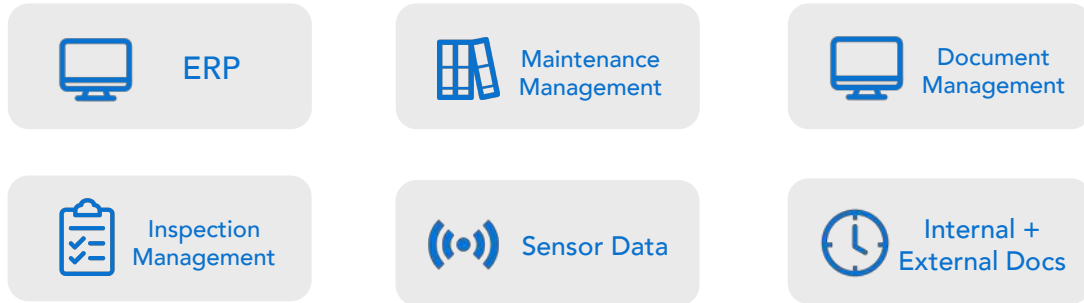


Personnel Morale Damage

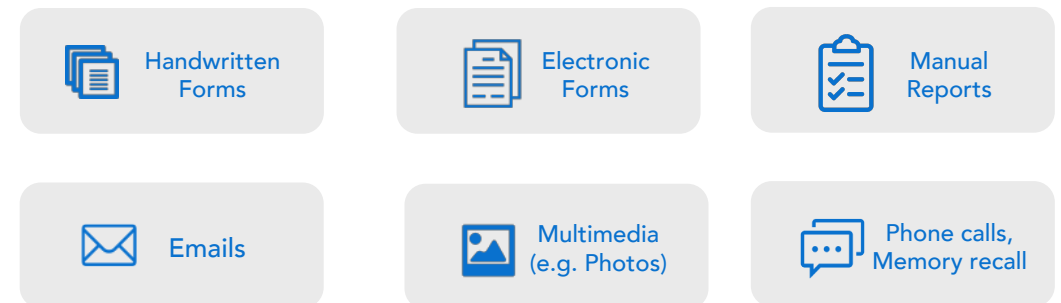


# The Challenge In Perspective

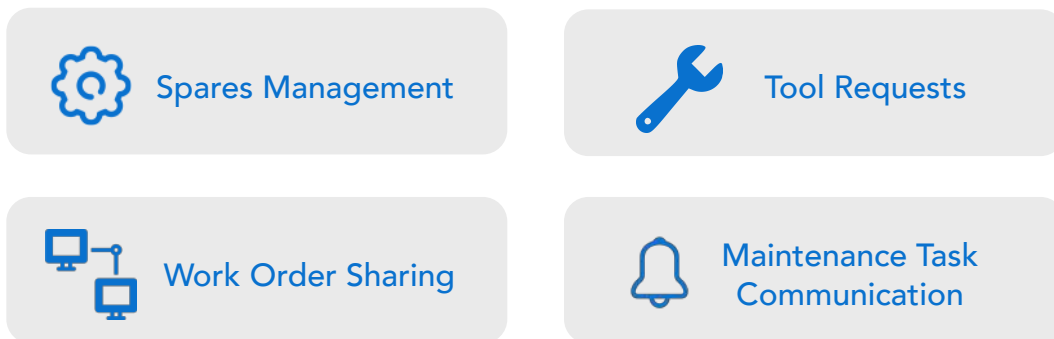
## Critical knowledge is inaccessible due to Fragmented Systems



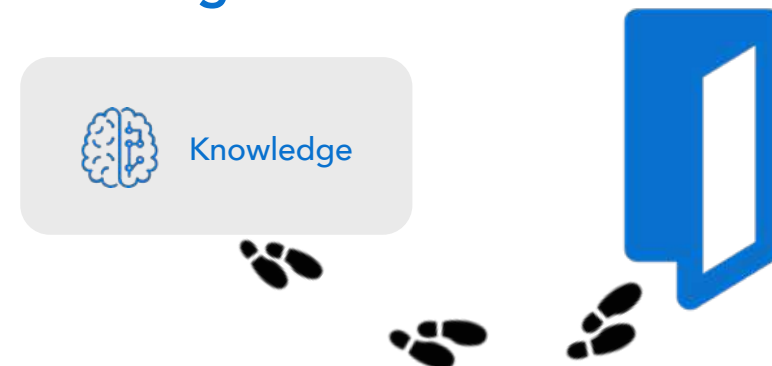
## Man hours are wasted on Manual and Disconnected Processes



## Inefficient use of technicians' time with Lack of Automation



## Experienced technicians retire and organisations lack Knowledge Retention



# Transforming Maintenance

## With Artificial Intelligence and Machine Learning



**Artificial Intelligence (including Machine Learning and Neural Networks)** enables a system to learn, self-improve and interpret as it performs a task, refining over time through strategic trial and error.



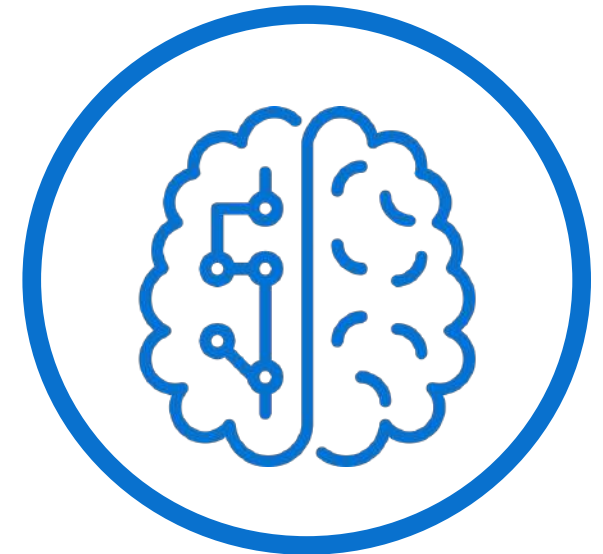
**Natural Language Processing** fills the gap between human communication and computer understanding.



**Big Data** allows systematic extraction of information from large and complex datasets.



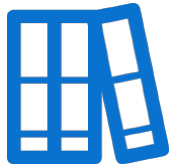
**Our unique utilisation of these technologies** allows us to perform tasks such as skilled analysis, pattern recognition, image and speech recognition, analysis of massive amounts of data, and sophisticated decision making.



*AI works like a human brain,  
but with advanced analytic  
and processing power*

# Achieving Optimised Maintenance

Requires a system that:



Provides the right **technical information** at the right time and place



**Advises and guides** the technician



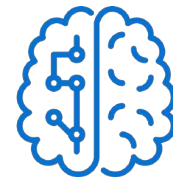
**Enables real-time collaboration** between technicians



Advises if the right **tools are available** and their location



Advises if the right **spares are available** and their location



Continuously **learns and optimises** the maintenance process

# The Lex<sup>X</sup> Platform

## Provides the Solution



Optimised equipment availability



Threat Classification

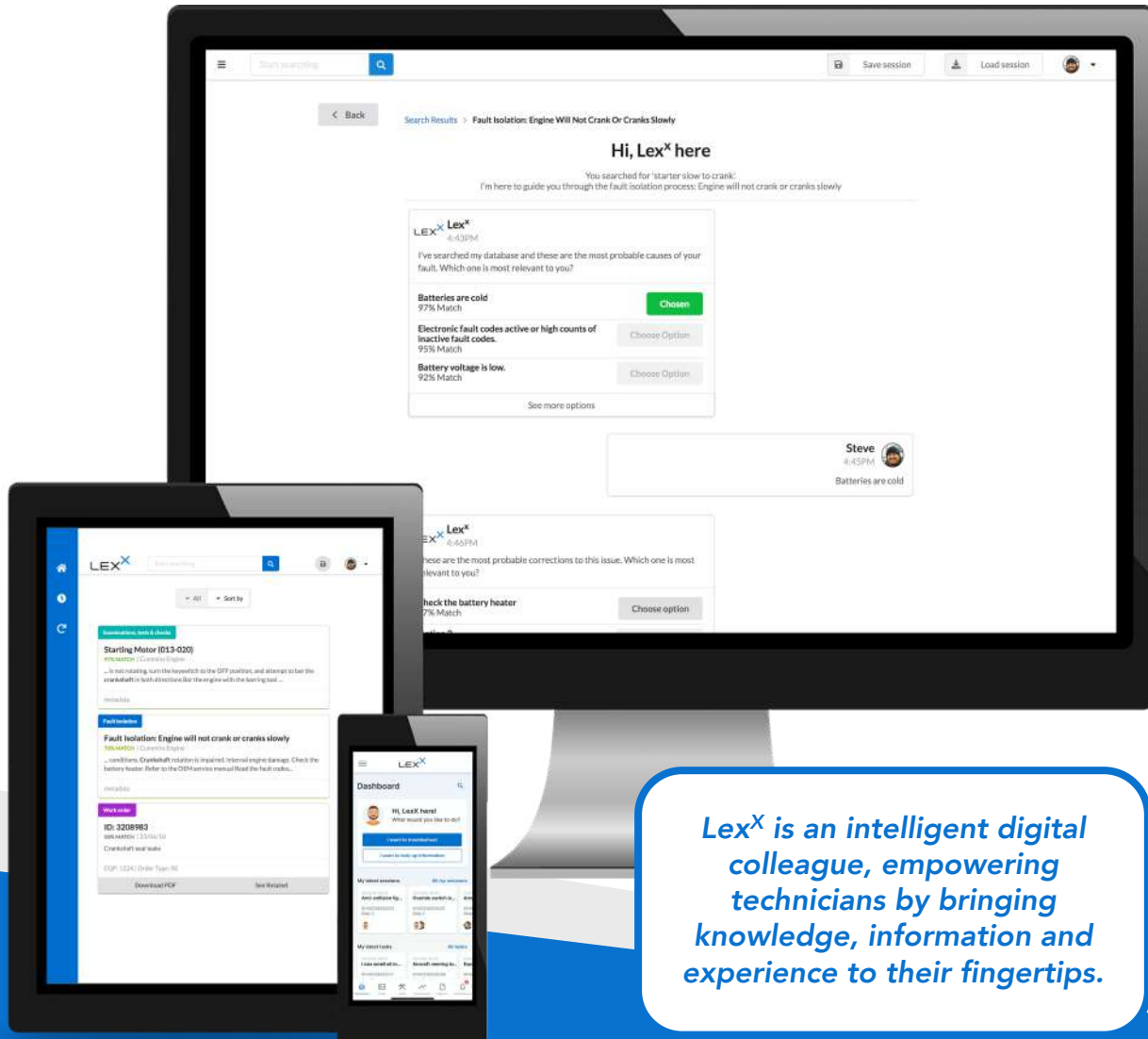


Object Identification from Drones



Operational Problem Solving

*Lex<sup>X</sup> is an intelligent digital colleague, empowering technicians by bringing knowledge, information and experience to their fingertips.*



# Lex<sup>X</sup> Works By:

- Providing a **natural language interface** to ERP, Maintenance and Document Management Systems, so as to extend and enhance their capabilities
- Utilising any “connected” device (phones, tablets, etc.) to provide solutions at **the right time and place**
- Being an **intelligent system that comprehends and learns** from:
  - Asset behaviour
  - Technician behaviour
  - Organisational Data
  - Maintenance “Lessons Learned”
- Guiding the technician at all stages of the maintenance process, providing advanced troubleshooting capabilities

# Lex<sup>X</sup> *Delivers. Enables. Empowers.*

- Makes all technical information available through **one platform**
- **Unlocks inherent knowledge and wisdom** in underutilised data
- Enables the ongoing **capture of field experience**
- Provides **data-driven insights**
- Provides **collaborative digital tools** for technicians
- **Reduces risk** of Maintenance errors

**Do it once,  
do it right**



# The Value Lex<sup>X</sup> brings to Maintenance Operations



Reduced Mean Time to Repair, greater workforce capacity, increased Asset Availability and Mission Readiness



Improved data integrity for forecasting, planning, and Technician support

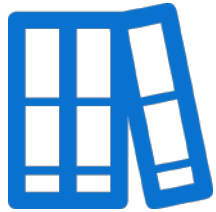


Enables knowledge management and retention



Empowers modern day Defence personnel with a modern age technology

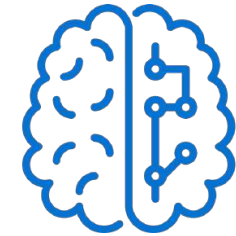
# How our Technology Works



Lex<sup>X</sup> Ingests all technical information (**digital and handwritten**) and structures the data in a unique manner to facilitate the AI and NLP capabilities of Lex<sup>X</sup>.



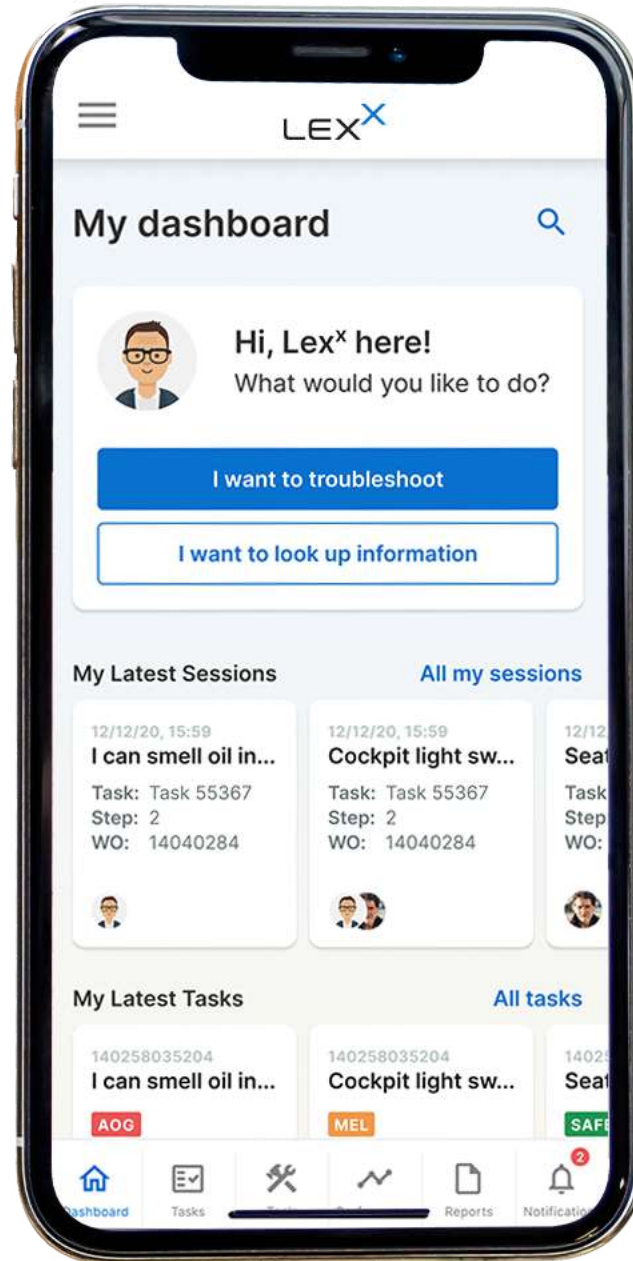
This information is used to provide solutions and guide the Technician through **Natural Language interaction** (in conversational mode, like having an instant messaging discussion with a human)



Lex<sup>X</sup> utilises AI and Machine Learning to **learn over time** from your organisational data, Technician interaction, and equipment behaviour, so that troubleshooting is continually refined.

# How our Technology Can Be Used

*The user interface is  
customised around  
individual Client  
requirements and  
processes*



Lex<sup>x</sup> can be used in the following Line and Heavy Maintenance areas:

- ⚙ Troubleshooting;
- ⚙ Planned, preventive and breakdown maintenance;
- ⚙ Performance diagnostics and analysis;
- ⚙ Compliance & reporting;
- ⚙ Issue and problem management;
- ⚙ Asset life cycle management;
- ⚙ Training and simulation;
- ⚙ And publication management

*...and even more*

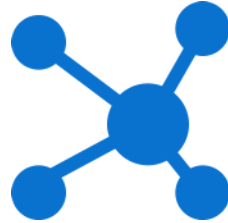
# Lex<sup>X</sup> Platform Features

## What Do You Get?



### Intelligent Maintenance Assistant

Configurable for Client need or specific maintenance use-cases (i.e. fault management, parts lookup)



### Synergy Suite

Bring the team to context for help, advice, or approval



### Performance and Reliability Dashboards

Configurable dashboards for performance management and reliability engineering user groups

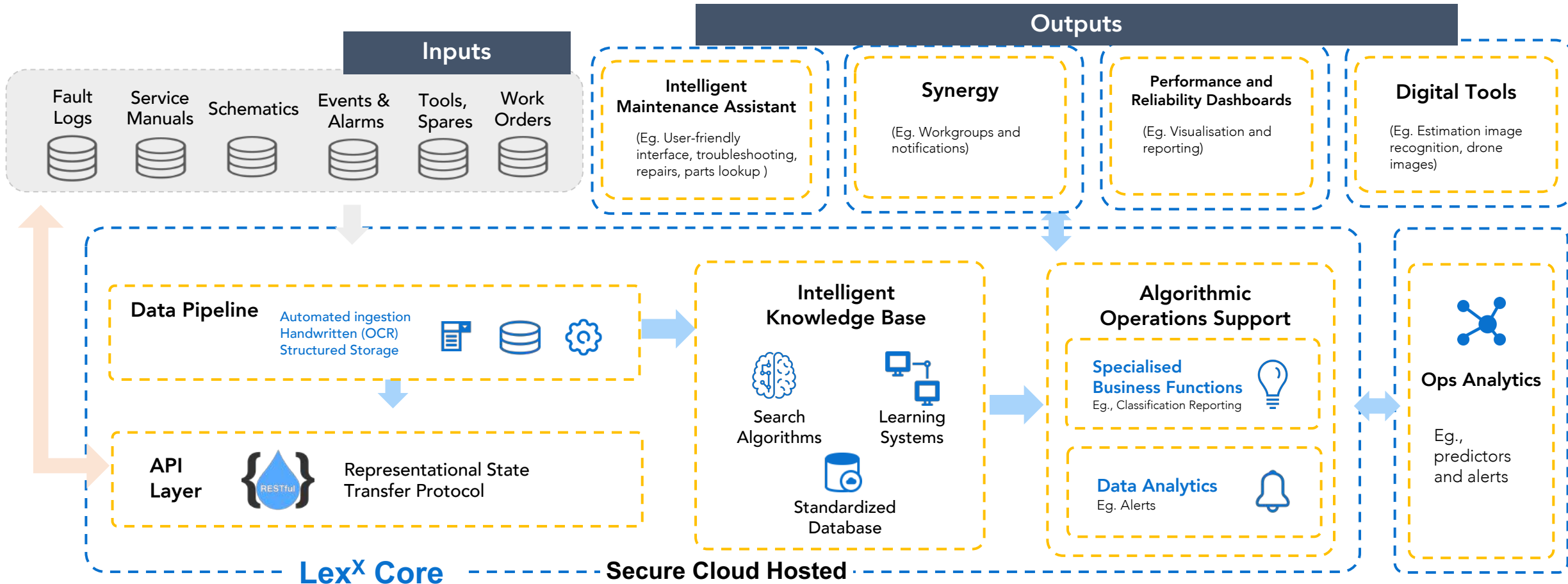


### Digital Tools

Tools that empower the technician, such as automation for repetitive tasks (i.e., estimation, image recognition, drone images)

# Lex<sup>X</sup> Platform Modules

## How Is It Powered?



# Our Vision



Our vision is to  
**transform operations & maintenance** for our Defence Clients by **empowering every technician** every day



# Enabling the Lex<sup>X</sup> Vision

## With Maintenance 4.0

Industrie 4.0 originated from a high-tech strategy initiative of the German Government



Lex<sup>X</sup> CEO and Founder, [Anant Sahay](#), coined the phrase [Maintenance 4.0](#), applying Industrie 4.0 philosophies into the area of maintaining systems rather than manufacturing them.

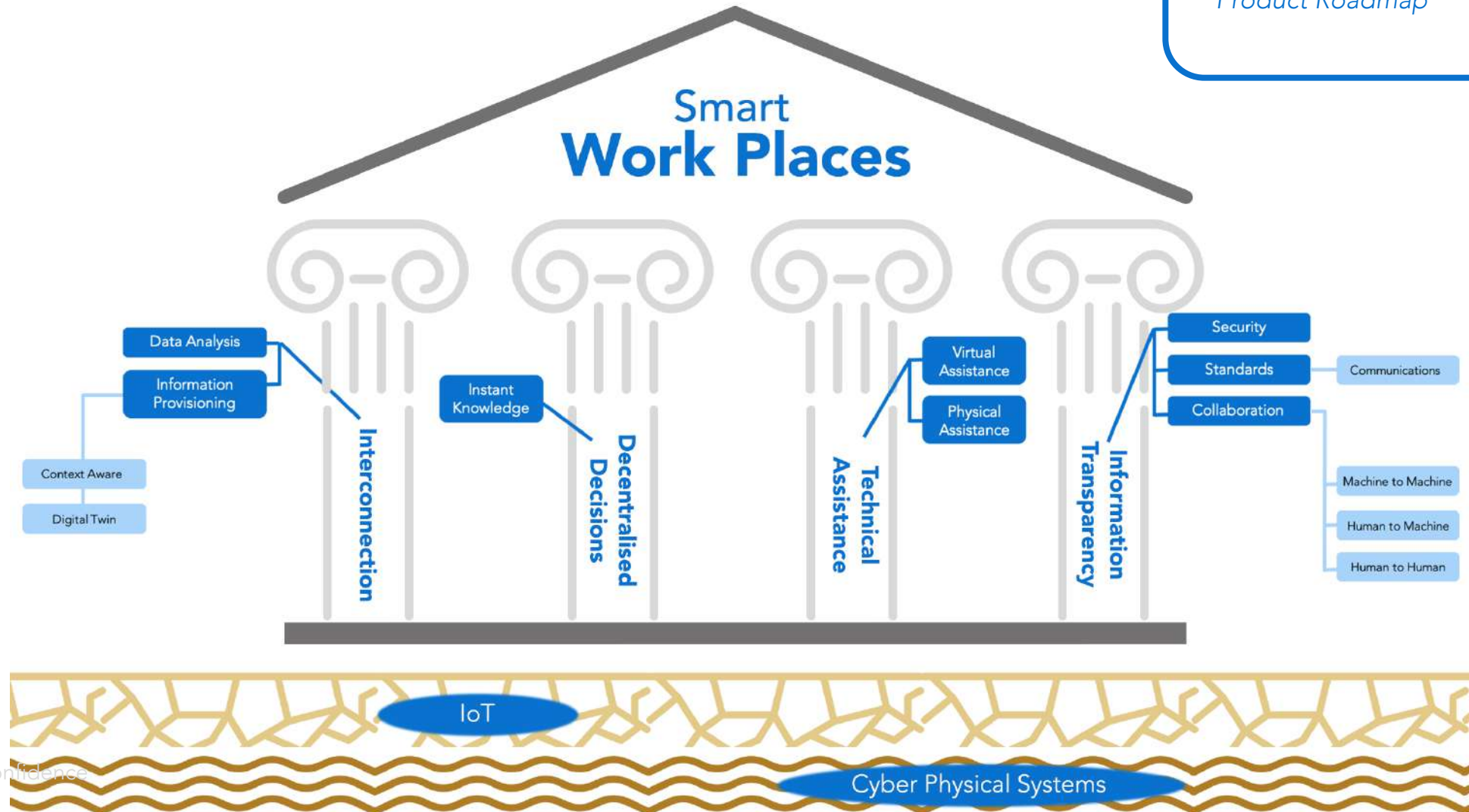
Maintenance 4.0 will [revolutionise maintenance operations](#) around complex equipment by use of new and emerging technologies, new philosophies and the move to a [fully digital world](#).



# Maintenance 4.0

## The Future of Maintenance

The four pillars of our Maintenance 4.0 vision will continue to drive our Product Roadmap





# Success Stories



*"Lets you find the fault and make the decision **straight away**"*  
EnergyAustralia Technician

*"**Lex<sup>X</sup>** is addressing a critical challenge that the global industrial sector faces amidst a paradigm shift in workforce demographics and dynamics."*  
Krishna Navalpakkam, Global Strategy



*"...it may help us **reduce the TAT of providing technical solution by 15 minutes.** This number is quite significant if the solution is for minimizing operational disruption"*  
Etihad Engineering Executive

*"We identified a distinct need to invest in and bring up the best in startups and SMEs worldwide to lead in this revolution. We're excited by our engagement with Lex<sup>X</sup> and look forward to **delivering their innovative capabilities across our O&M portfolio**"*

Carla Pimenta, EDP Group Innovation Head of Startup Engagement



*"The Lex<sup>X</sup> platform is most certainly **the most succinct, intuitive and relevant aircraft trouble shooting platform I have utilised** in my 30+ year aviation engineering career. The fact it is linked to the OEM documents is clearly critical and certainly saves considerable time when assessing faults as they "roll in".*

Darren Stone, Licensed Engineer, Jetstar Engineering and Managing Director of Asset Excellence

## Awards

**Winners – Schneider Electric Bold Ideas Challenge | Global Innovation Summit**

**Winners – EDP Global Innovation Award | Lisbon Web Summit**

# Our Partners

Lex<sup>X</sup> is a proud partner of the following organisations,  
each experts within their fields



# Why is Lex<sup>X</sup> Unique?

## What Others Say:



*We believe that the Lex<sup>X</sup> platform is an evolutionary, unique product. By incorporating machine learning concepts it has set an industry best practice of enhanced data-driven MRO operations*

Frost & Sullivan

## What We Say:



*We have a user-centered design approach for product development – Lex<sup>X</sup> is trained to understand the user, instead of the user needing to understand Lex<sup>X</sup>*

George Mathew | Lex<sup>X</sup> Product Director

US Patent Pending (Application No. 63/031, 751)

*Lex<sup>X</sup> is created in the digital age, for the digital age, **purely** for maintenance operations*

# Operating Principals



**Anant Sahay**  
**Founder and CEO**

Anant is an entrepreneur, inventor, thought leader, published author, aviation domain expert, and Data Scientist, with consulting, IT architecture and project management credentials. He is a qualified Production Engineer, with MBA. Anant has 30 years experience in the aircraft MRO field, including 15 years as world-wide domain expert for IBM.



**Mike Harris**  
**Head of Aviation, Defence, and Key Verticals**

Starting in Aviation in 1979 when he joined the Royal Australian Air Force as an apprentice fitter, Mike has always looked to “make things better”. In the last decade or so, Mike was in Senior Engineering Management roles, including multiple stints as a CASR Part 42 “Responsible Manager” with a significant Australian. Recently was the “Manager Engineering Technology and Innovation”, and looking to focus entirely on Aviation Innovation at a Global level.



**Nishant Sahai**  
**Chief Technology Officer**

Nishant has served in several leadership positions in the aerospace industry and the not-for-profit sector, including the process improvement group of the Boeing 787 Dreamliner and Senior National Lead Advisor at the Australian Red Cross Blood Service. Nishant holds a Bachelor of Engineering from RMIT, and a Master’s in Business Analytics from Deakin University.

# Operating Principals



**Hersh Sahai**  
**Director Global Sales**

Hersh has held positions at IBM and Accenture advising senior executives of Fortune 500's in Enterprise Asset Management and Supply Chain Optimization. Hersh holds a patent with the USPTO in data analytics, a B.A. in Economics from the University of Sydney and a dual M.B.A. from both Columbia Business School and London Business School.



**George Mathew**  
**Product Director**

George is a business and technology leader, with credentials in delivering business and economic outcomes leveraging technology, strategy and design to enterprise clients globally. George has an engineering degree and over 25 years of experience, having held key leadership roles at Cochlear, IBM and Infosys Australia.



**Michael O'Sullivan**  
**Commercial Director**

Michael has qualifications in finance and law (B Comm. LLB) gained from the University of NSW. He has an extensive background in building businesses including a key role as Commercial Director of KAZ Group Ltd. Michael has, in recent years, held similar roles across a number of technology based businesses.

# Thank You

*Meet your Challenge*



## CONTACTS

**E** [hello@lexxtechnologies.com](mailto:hello@lexxtechnologies.com)

**W** [www.lexxtechnologies.com](http://www.lexxtechnologies.com)