



INCOSE UK Annual Report



Contents

President’s Summary.....	2
Professional Development	3
Professional Registration.....	3
Systems Engineering Certification.....	3
Groups	4
Products and Services.....	5
Engagement Activities	6
UKAB	6
Early Careers Forum	6
Member Communications.....	6
External Engagement.....	6
Financial Summary	8
Council Appointments	9
2019 Elections	9
INCOSE Awards.....	10
INCOSE UK Outstanding Service	10
INCOSE International Dedicated Service Awards	10

President's Summary

At a time of global uncertainty, it is clear that the INCOSE community, both here in the UK Chapter and the world at large has a part to play in working together to meet new and exciting challenges for the Systems Engineering profession. In support of this, INCOSE UK is working closely with the INCOSE Board of Directors and our EMEA Sector colleagues to strengthen our partnership to enter into a revised, robust and fit for purpose Memorandum of Agreement, which we hope to formalise at the 2019 International Symposium.

Throughout 2018 we worked to build on our experience from the global Chapter Governance and Finance Model Task Team to identify a new financial model for INCOSE UK. I am delighted to confirm that we have been successful and are ready to go live in April 2019.

INCOSE UK members continue to deliver strong input to INCOSE global programmes. Perhaps the most visible of these activities is the launch of a new Competency Framework, as announced at the 2018 International Symposium. The INCOSE Competency Framework was not a new build, more an overdue evolution of the INCOSE UK Competency Framework first published in 2010. We were further excited to see two of our members receive Recognition Awards from INCOSE for their work as part of the INCOSE Global Chapter Governance and Finance Model Task Team

2018 was the UK Year of Engineering and provided the main theme for our Annual Systems Engineering Conference as 149 members and sponsors gathered in the Vincent Building at Cranfield University. In partnership with our Advisory Board members, we launched a Year of Engineering special edition of "Think Engineer" in support of our continuing STEM activities. We were also pleased to be a sponsor for UK MOD Defence Equipment and Support's Hyper-Loop Challenge. This event saw several leading UK Defence employers send graduate engineer teams to Abbey Wood to participate alongside MOD Graduate Engineers in a series of Systems Engineering challenges.

In other outreach activities, we confirmed our support to the Defence Growth Partnership Systems Engineering Masters Apprenticeship Programme (SEMAP). SEMAP is designed to help grow UK Defence Systems Engineering capability and we are, of course, delighted to support. Internally, we were pleased to invite the Chairs of our working, interest and regional groups, in addition to our Early Career Forum representatives, to join with Council and UKAB representatives to the first of what will become an annual event to facilitate greater collaboration across INCOSE UK areas of interest.

2018 was not without its challenges. We transitioned our financial reporting year to align with the general UK Financial Year (April 1 to March 31). As a result, we are reporting a loss for 2018, though this was within our forecast, and is an outcome of our significant investment in Professional Development. Though our overall position is challenging, it is under firm control and scrutiny by the INCOSE UK Finance sub-committee. 2019 will see further scrutiny of the trading position of INCOSE UK Limited as we transition to the new financial model in April 2019.

Finally, and most importantly, as a professional engineering institution INCOSE UK exists for its members and the promotion and advancement of the Systems Engineering profession. In 2018 we saw a 42% increase in Systems Engineering certifications achieved within the UK, coupled with a modest increase in overall membership.

For INCOSE UK 2018 has undoubtedly been a busy and productive year. As we go forward in 2019 working in close collaboration with the INCOSE global community and the Engineering Council, we will continue to serve and promote the UK Systems Engineering profession as we celebrate our 25th Anniversary.

Kirsty Akroyd-Wallis, INCOSE UK President



Professional Development

Continual Professional Development is a bedrock of the engineering profession. During 2018 we continued to provide two main programmes for our members to establish their Systems Engineering competence.

Professional Registration

29 INCOSE UK members are registered with the Engineering Council, and overall the interest in Registration remains steady with 4 new registrants in 2018. INCOSE UK intends to work with other Professional Affiliates of the Engineering Council to grow UK registrations.

Systems Engineering Certification

INCOSE UK offers a bespoke certification service to INCOSE UK members. 2018 saw an outstanding 42% growth across all three certification tiers and the Chapter has the 4th largest Systems Engineering Professionals community within INCOSE.

	Achieved in 2018	Total Overall
Associate Systems Engineering Professional (ASEP)	20	64
Certified Systems Engineering Professional (CSEP)	6	62
Expert Systems Engineering Professional (ESEP)	1	9
	27	135

2018 also saw increased requests for certification Knowledge Exams for larger groups of candidates from single organisations.

Following a successful pilot, INCOSE Council intends to submit a business case to INCOSE in 2019 for a move toward full UK implementation of a competence-based Certification scheme.

The success of the Professional Development offering to our members is the result of a significant investment over a number of years. Looking forward to 2019, the Finance and Governance sub-committee will be working closely with the Professional Development team and the INCOSE UK Secretariat to ensure the ongoing offering is affordable whilst maintaining a high level of member benefit.



Groups

INCOSE UK Groups provide a means for INCOSE UK members to share their best practice and contribute to the furtherance of Systems Engineering. INCOSE UK supports group activities at three levels:

Technical Working Groups looking specifically to produce artefacts or publications promoting Systems Engineering practice.

Interest Groups provide members with a forum to share or learn about emerging Systems Engineering best practice.

INCOSE UK Regional Local Groups provide a forum for members in a several areas across the UK to meet and discuss Systems Engineering topics and developments.

Our INCOSE UK Group activities not only offer members an opportunity to enhance their understanding but also act as a mechanism for continual professional development.

In 2018 over 30 meetings of the various INCOSE UK Groups took place and our current range of groups covers:

Working Groups	Interest Groups	Local Groups
Agile Systems Engineering Architecture Human Centric Systems Engineering Model Based Systems Engineering Systems Engineering and Quality Management Systems Engineering and Project Management (SEPM) Service Systems Engineering	Model Based Systems Engineering Railway Automotive Energy Systems Enterprise Systems Engineering	Bristol Midlands North West Scottish South Coast

Products and Services

In 2018 we continued to grow our range of publications with the release of 'TeamStorming' - the Participants guide and Facilitators guide. In addition, at ASEC2018 we launched a special edition of 'Think Engineer' sponsored by several of our Advisory Board organisations, produced to coincide with the Year of Engineering. Also, the Z13 guide 'Systems Engineering and Project Management – Top Ten Tips' increased our Z guide library.

As ASEC continues to attract excellent technical papers, for the first time we published our 'Annual Systems Engineering Conference Proceedings'. These were made available for purchase at ASEC 2018 and we intend to continue this concept to celebrate our 25th Anniversary at ASEC 2019. The second Systems Summit was held at ASEC 2018 with the theme being 'How can INCOSE UK promote STEM'. The summit is proving to be an ASEC success and will be repeated in 2019.

Whilst we took a decision to hold further development of the INCOSE UK Architecture we are considering how this might continue through academic projects.

The opportunity to develop INCOSE UK Technical services progressed with proposals for an endorsed Training Provider and Competency Framework endorsement schemes both being considered by Council. The Endorsed Training Provider Scheme will now move to a pilot project involving two potential providers assisting with the test and evaluation of the programme in 2019.

Technical events in 2018 included:

- April:** Requirements Management a collaboration with the Institution of Railway Signal Engineers (IRSE)
- June:** INCOSE UK Technical Training Day
- November:** ASEC 2018 and Systems Summit at Cranfield University

Engagement Activities

UKAB

The UK Advisory Board role is to Advise, Promote, Support, Challenge and Communicate and it does so to an increasingly broad base, which now covers 31 organisations.

The Board remains an important voice for employers of UK Systems Engineers providing advice to Council on areas of interest for UK organisations on topics such as defining career paths, compelling arguments for Systems Engineering development, and the emerging ethical issues surrounding AI.

In return UKAB membership offers networking opportunities, education and development, influence within INCOSE UK, access to good practice, recognition as a key player in UK Systems Engineering, exclusive Marketing opportunities. Additionally, free access is provided to many INCOSE UK publications and services.

Early Careers Forum

The ECF was established in 2017 following a joint UKAB and Council activity with the aim of providing a voice for early career systems engineers. Key milestones for 2018 included:

- Elections of Officers
- Terms of Reference defined, approved and published by Council.
- ECF website launched

ECF members hosted and took leading roles in several key events:

April:	INCOSE UK, UKAB and Groups Joint Meeting
May:	Year of Engineering Master Class Capability Engineering Tutorial - A practical introduction to Capability Systems Engineering
May:	Engineering Council Recruiting and Engaging Students Workshop
June:	MBSE WG and ECF collaborative meeting
July:	ECF Summer Event
November:	ECF MBSE and Certification Seminar

Member Communications

INCOSE UK's use of social media is proving to be very successful, with over 1400 members on LinkedIn. In addition, there were 3 issues of ePreview and 2 issues of Preview magazine, which were made available on-line.

Much work was put into updating our processes and website to comply with the new GDPR regulations. Updates were made to the website in 2018, with further improvements planned for 2019.

External Engagement

In 2018, INCOSE UK was approached by the Institution of Gas Engineers & Managers (IGEM) to support the development of their Future Gas System Architecture road-mapping project. This approach builds relationships built with the National College of High Speed Rail and Transport for New South Wales in 2017. We also saw developments to link with key people in other relevant professional bodies including the Institute of Asset Management and the UK Systems Society.

A successful bid for INCOSE Local Chapter Outreach funding enabled us to continue the ASEC Systems Summit series, which in 2018 explored key topics for Systems Engineering and the wider community. The theme this year was "The future of STEM in Systems Engineering".



Building on 2017 and 2018 activities INCOSE UK will look to adopt the Outreach targeting toolset from the INCOSE International approach in 2019, and work will continue to implement a robust Outreach Change Programme for increasing INCOSE UK influence to be implemented in early 2019.

Financial Summary

In 2017 a review of INCOSE UK operating practice identified previous measures taken to address the emergent financial challenge identified in 2015 had not achieved the intended outcome, to reverse consumption of INCOSE UK reserves. A programme to rationalise INCOSE UK operations began in late 2017 with the initial aim of streamlining financial reporting by moving to a single reporting year reflecting the UK national financial year. This was achieved by establishing an interim 9-month accounting period from June 2017 to March 2018 to enable April to March accounting in line with UK national financial reporting from April 2018.

Financial forecasting identified a probable trading loss for the year ending March 2018 in the order of £20k. In fact our operating loss for the year ending March 2018 was £19k. Whilst this clearly reduces our reserves it is nonetheless significant that our financial forecasting and planning are accurate.

In 2018 the INCOSE UK Limited (the trading arm of INCOSE UK) Board of Directors established a Finance Subcommittee to be chaired by the immediate Past President with the aim to identify and implement a new financial operating model to facilitate accurate management and scrutiny of INCOSE UK operating costs. The proposed new model was approved by Council, with adoption to commence in April 2019. Overall INCOSE UK continues to be in a sound financial position with an available reserve that serves as a contingency in the event of any key risks being realised.

In 2018 after a number of challenging discussions we successfully renegotiated membership payments with INCOSE Central Office, which has resulted in a 7% increase in membership dues retention for INCOSE UK. As a result, in 2019 we will again look toward investing in improving our infrastructure and the service we provide to our members.

The future is bright for Systems Engineering globally and we continue to influence and shape the profession on the world stage.

Statement of financial position 31 March 2018

	31/03/18		31/05/17	
	£	£	£	£
Fixed assets				
Tangible assets	-		871	
		-		871
Current Assets				
Stocks	10,625		10,690	
Debtors	21,992		69,340	
Cash at bank and in hand	251,051		276,019	
	<u>283,668</u>		<u>356,049</u>	
Creditors: amounts falling due within one year	<u>(174,188)</u>		<u>(228,475)</u>	
Net current assets		<u>109,480</u>		<u>127,574</u>
Total assets less current liabilities		<u>109,480</u>		<u>128,445</u>
Net assets		<u>109,480</u>		<u>128,445</u>
Capital and reserves				
Profit and loss account		<u>109,480</u>		<u>128,445</u>
Members funds		<u>109,480</u>		<u>128,445</u>

Council Appointments

Following the November 2018 Annual General Meeting the officers of INCOSE UK and the Board of Directors of INCOSE UK Limited are as follows:



The results of the 2018 election of officers being:

- Ian Gibson for a 2-year term as President Elect then President for a further 2-year term.
- Chris Lamb for a 3-year term as Outreach Director.
- Ian Presland for a 3-year term as Professional Development Director.

2019 Elections

In accordance with our Memorandum of Understanding with INCOSE and INCOSE UK Articles of Association the following elections of officers will take place in 2019:

- Technical Director for a term of office of 3 years
- Financial Director for a term of office of 3 years

The successful candidate for the office of Finance Director will automatically be appointed Finance Director of INCOSE UK Limited.

INCOSE Awards

INCOSE UK Outstanding Service

The following individuals were recognised for their outstanding service on behalf of INCOSE UK:

Railway Interest Group	RIG deserve an award as they have regularly held monthly interest group meetings for the last 3-4 years in the London area, with minimal support from INCOSE UK. The events have been publicised and organised by RIG members. Attendance at these meetings has steadily grown and resulted in fruitful partnerships with organisations such as the Institution of Railway Signal Engineers (IRSE). This has resulted in the promotion of good Systems Engineering practice and raising of the INCOSE profile.
Michael Morua	Mike has organised and hosted a joint IRSE-INCOSE UK RIG conference at the University of Birmingham. This is following the success of the same event last year, and achieved attendance of 100 people, with a waiting list of people to attend. This has been with support of INCOSE UK RIG, but with minimal support from INCOSE UK to fund or publicise this.
Karl King	Karl has since the last ASEC, taken on the role of RIG Secretary, keeping on top of organising RIG activities and communicating these with RIG attendees. Karl has also organised a joint IRSE-INCOSE UK RIG conference at the University Birmingham. This is following the success of the same event last year, and achieved attendance of 100 people, with a waiting list of people keen to attend. This has been with support of INCOSE UK RIG, but with minimal support from INCOSE UK to fund or publicise this. Karl is now seeking to run this as a regular annual INCOSE UK Event.”

INCOSE International Dedicated Service Awards

The following individuals were recognised by the INCOSE Awards Committee for their dedicated service to INCOSE as members of the Global Chapter Governance and Finance Model Task Team chartered by the INCOSE Board of Directors 2016-2017:

Ian Gibson

Ivan Mactaggart

This concludes the INCOSE UK 2018 Annual Report