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SYSTEMS ENGINEERING PROFESSIONAL (SEP) CERTIFICATION OVERVIEW

San Diego INCOSE Regional Mini-Conference

December 1, 2018

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SOURCE OF SLIDES

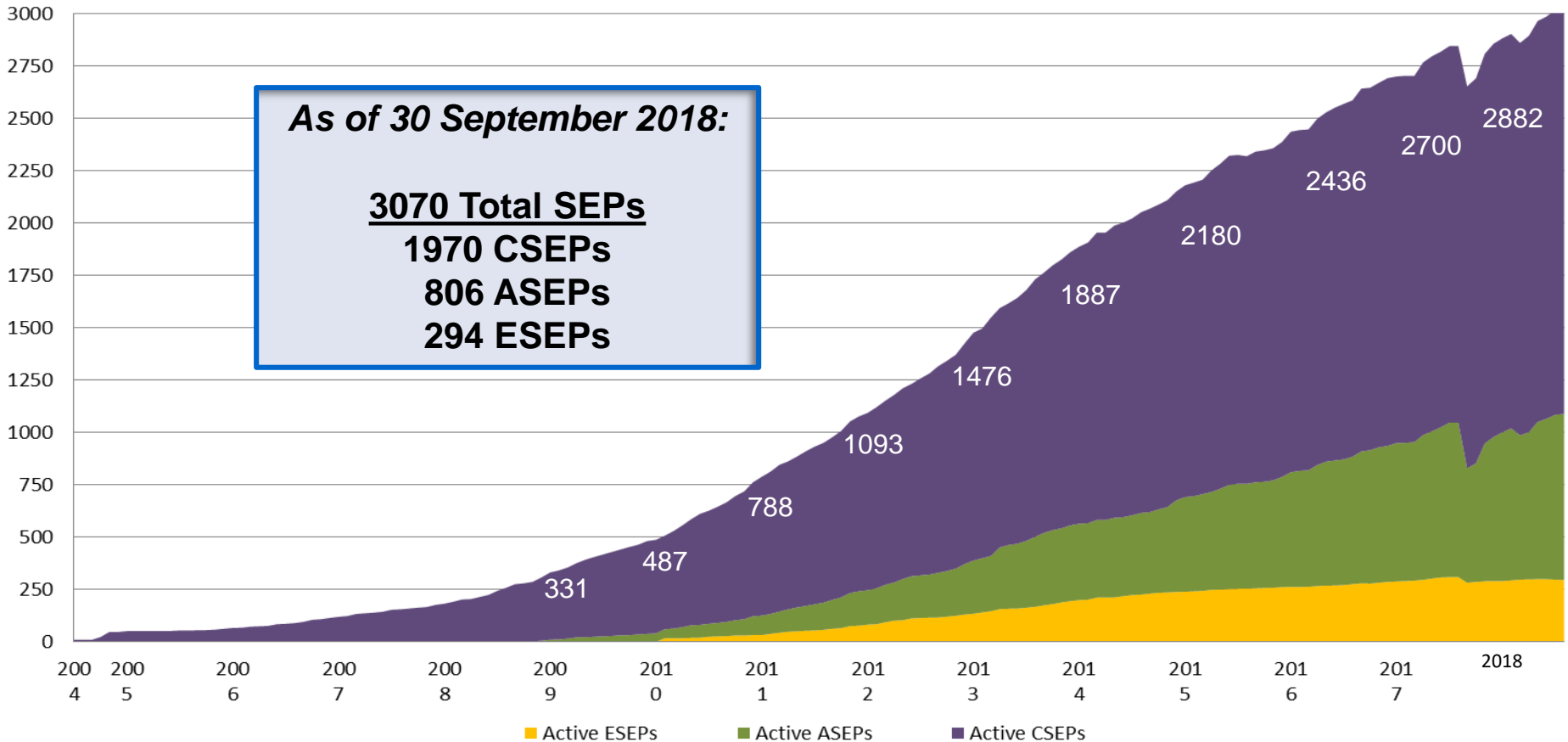
- <https://www.incose.org/systems-engineering-certification/certification-resources>
- https://www.incose.org/docs/default-source/certification/incose-sep-overview.pptx?sfvrsn=7b4db9c6_14
- https://www.incose.org/docs/default-source/certification/201800831-incose-statistics.pptx?sfvrsn=d6ea95c6_10
- <https://www.incose.org/systems-engineering-certification/certification-exams#Training%20Providers>

The INCOSE certification program's three levels of certification have grown steadily since 2004.

INCOSE Systems Engineering Professionals

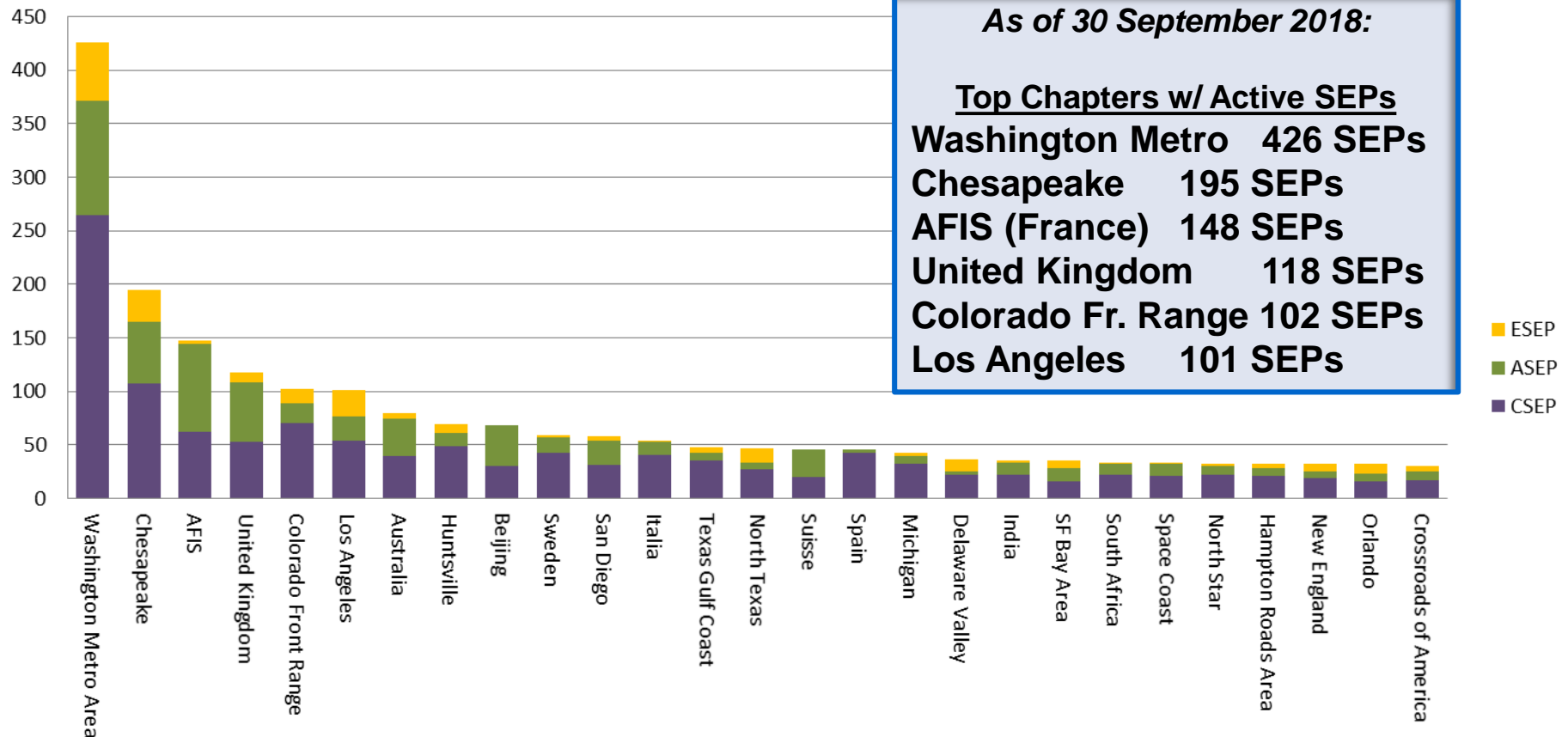
As of 30 September 2018:

3070 Total SEPs
1970 CSEPs
806 ASEPs
294 ESEPs

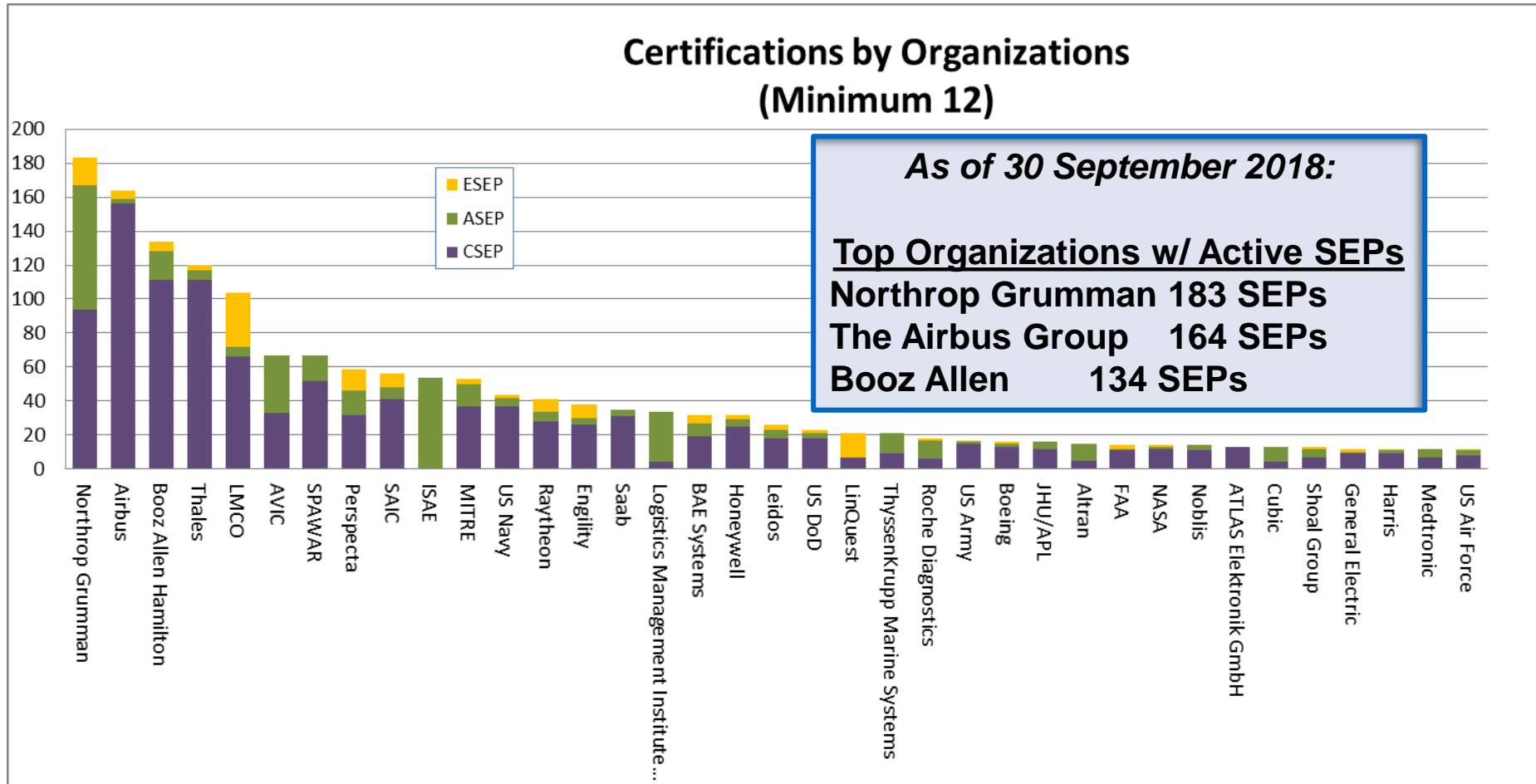


Many INCOSE Chapters have Certified Professionals

**Certifications by Chapter
(Minimum 30)**



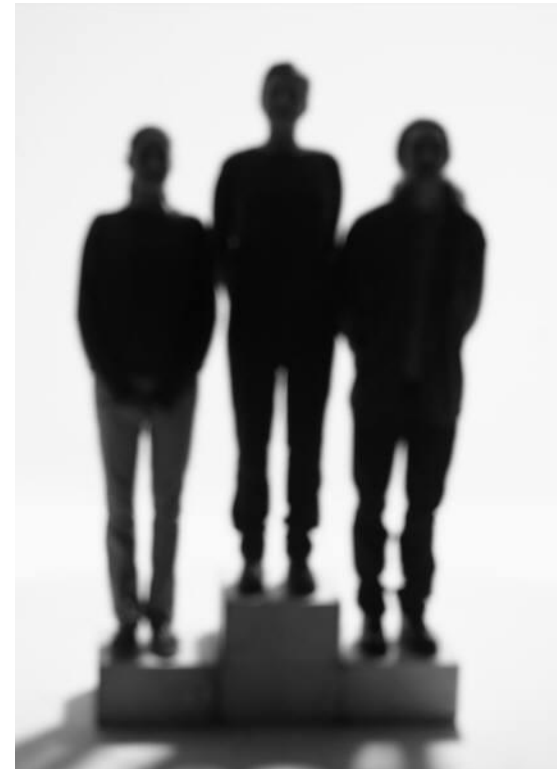
The INCOSE SEPs come from many different organizations and domains.



Why is Certification Important?

For organizations...

- Formally recognizes the Systems Engineering capabilities of your professional staff
- Can provide a discriminator for your proposals
- Can be used as part of the hiring and promotion process
- Provides an **independent** external assessment
- Encourages employee participation in continuing education

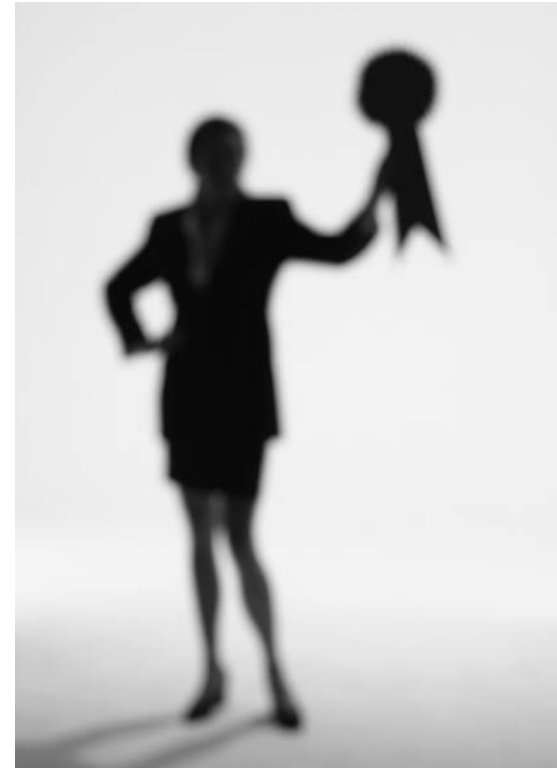


INCOSE SEP sets your organization apart!

Why is Certification Important?

For individuals...

- Formally recognizes your Systems Engineering capabilities
- Provides a discriminator for job applicants
- Provides a competitive advantage in your career
- Provides a **portable** Systems Engineering designation that is recognized across industry domains
- Participation in continuing education indicates your commitment to personal development






INCOSE SEP sets you apart!

Organizations are asking for SEP in job postings

- Aspiration Software
- Barrios
- Belcan Government Services
- Booz Allen Hamilton
- Central Intelligence Agency
- ClearMotion
- DRS Technologies
- Engility
- Georgia Tech Research Institute
- IDEMIA
- INNOVIM
- JB Management
- KBRWyle
- Leidos
- Lockheed Martin
- Logistics Management Institute
- The Mitre Corporation
- National Geospatial-Intelligence Agency
- Newbrook
- Noblis
- Northrop Grumman Corporation
- Oceaneering
- OG Systems
- Raytheon
- SAIC
- Sanmina Corporation
- Vencore

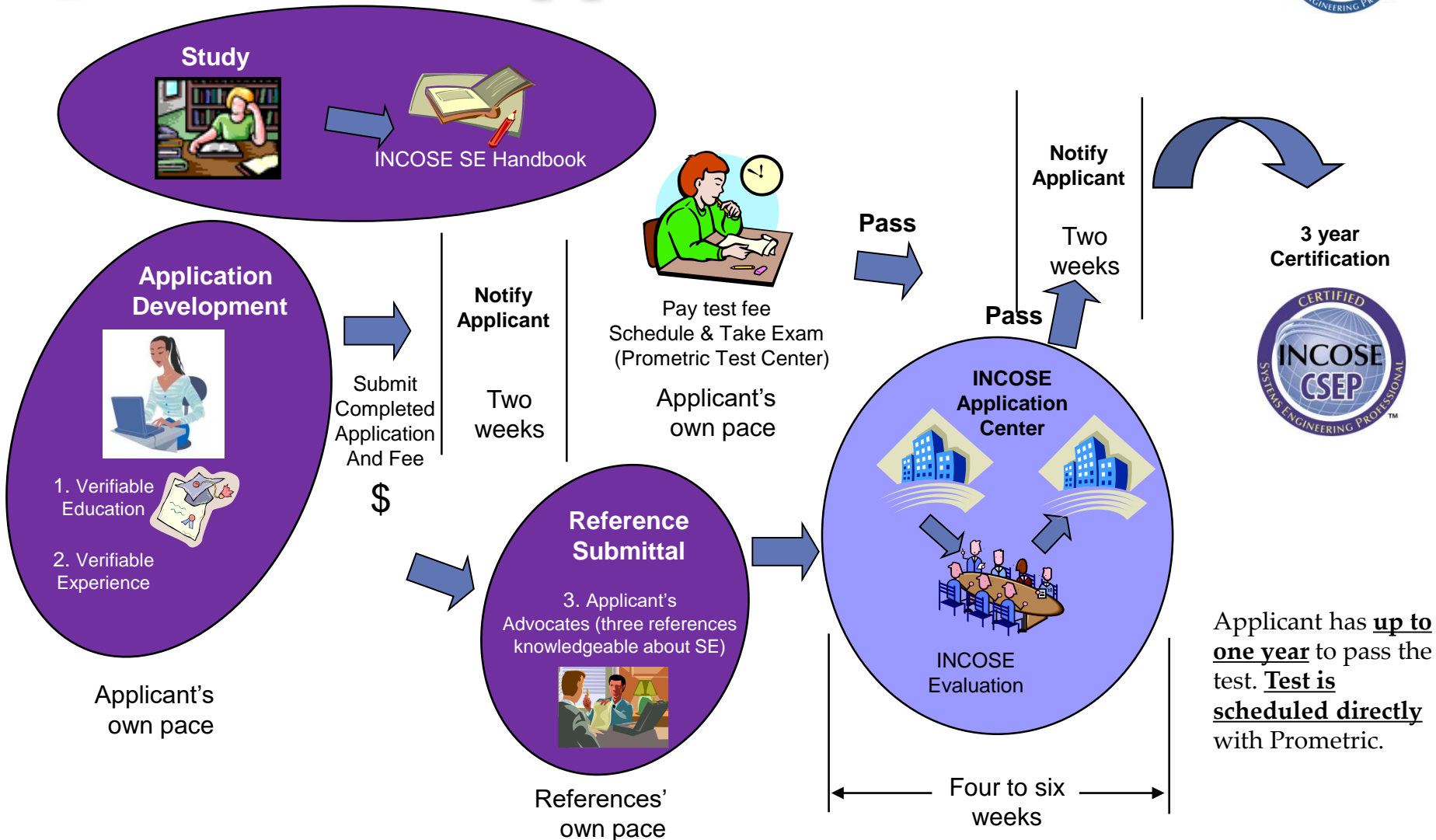
The Key Elements of INCOSE Certification (What is Certified?)



	SE Knowledge	Education	SE Experience	SE Leadership & Accomplishments
	Via an exam based on the INCOSE SE Handbook			
	Via an exam based on the INCOSE SE Handbook	Via confirmation of qualifying degree (or additional experience, if required)	Via confirmation of applicant's and references written experience claims	
		Via confirmation of qualifying degree (or additional experience, if required)	Via confirmation of applicant's and references written experience claims	Via oral review of applicant (and references, if required)

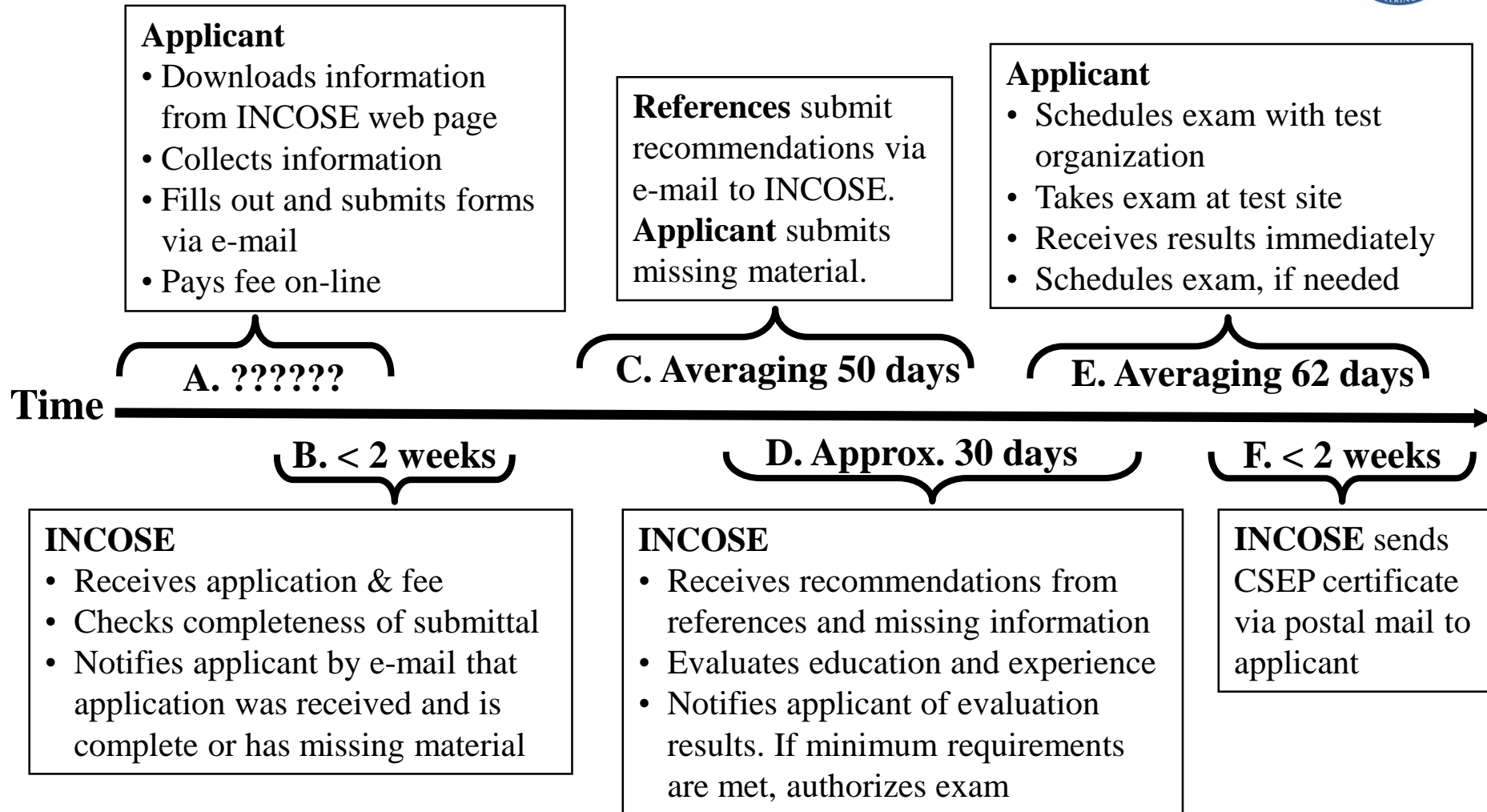
These four elements (knowledge, education, experience, and leadership & accomplishments) allow for a variety of SE certifications to be earned.

CSEP Application Process



How Long Will It Take to Get CSEP?

There is no one answer. Much depends on the applicant.



While the times vary, the average time for CSEP is ~200 days.

CSEP/ASEP Certification Knowledge Requirements

- CSEP/ASEP Exam Basis
 - INCOSE Systems Engineering Handbook v4
 - Free download available to INCOSE members
- Exam is
 - 2 hours in length
 - 120 questions
 - Administered electronically at world-wide Prometric locations
 - Offered as a pencil-and-paper test at many INCOSE events
 - Pass/Fail results provided immediately upon exam completion
- Candidates are eligible for two re-tests within one year of application submittal



**The INCOSE Systems Engineering Handbook
is the basis for the CSEP & ASEP exams.**

Representative Exam Questions

- Which three of the following are methods to express functional behavior? (Choose three)
 - ☐ Network Tree (NT)
 - ☐ Behavior Diagram (BD)
 - ☐ Allocated Requirement Diagram (ARD)
 - ☐ Functional Flow Block Diagram (FFBD)
 - ☐ Integrated Definition for Functional Modeling (IDEF) Diagram
- Which are three justifications for Configuration Management? (Choose three)
 - ☐ facilitates communication
 - ☐ forces change evaluations
 - ☐ prevents requirements changes
 - ☐ controls requirements changes
 - ☐ encourages requirements changes



*Note: These questions **ARE NOT** from the INCOSE Certification Exam. The format and content are similar (based on SEH v2A). They were created by CSM and Prometric and are used with permission.*

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Training Providers

Training provider

Advanced Systems Engineering Consulting
Applied Technology Institute
California Institute for Performance Management
Certification Training International
Decisionware
Endler Consulting
Honourcode, Inc.
Old Dominion University
Rücker + Schindele Consulting Engineers GmbH
SE-Training GmbH
SyntheSys
Sysnovation
Tonex

Email address

michael.krueger@ase-consult.com
ehonour@hcode.com
jwood@calipm.org
info@certificationtraining-int.com
info@decisionware.se
de@davidendler.de
ehonour@hcode.com
moveahead@odu.edu
Training@RundS.de
mike@se-training.net; seb@se-training.net
training@synthesys.co.uk
dave@sysnovation.com
Hgottlieb@tonex.com

Website

<http://ase-consult.com/>
www.aticourses.com
<http://www.calipm.org/>
<https://www.ppi-int.com/training/csep-asep-certification/>
<https://decisionware.se/en/>
<http://davidendler.de/>
<http://hcode.com/>
www.ODUINCOSE.com
<https://runds.de/>
<https://www.se-training.net/>
<http://www.synthesys.co.uk/>
<https://sysnovation.com/>
www.tonex.co

*INCOSE's Certification Program does not endorse or require any training provider. INCOSE Certification does not require training.
Information about INCOSE Certification: www.incose.org/systems-engineering-certification/certification*

Certification Renewal Requirements

- Certification is Valid for
 - 3 Years for CSEP, and applicants starting in 2016 must maintain INCOSE membership
 - 5 Years for ASEP and must maintain INCOSE membership
 - Indefinite for ESEP, but must maintain INCOSE membership
 - Extensions (e.g., Acq) are renewed concurrent with the base certification, regardless of when earned
- Certification renewal requires
 - Minimum of 120 Professional Development Units (PDUs)
 - Renewal application
 - Continuing education log submittal
 - Must be submitted before current certification period ends
 - Up to 30 “excess” PDUs can be “carried forward”

INCOSE certified professionals have an ongoing growth and learning obligation



WHAT IS YOUR
NEW YEARS RESOLUTION?



So What Certification is Right for You?



- If you have just started (or plan to start) practicing systems engineering or have recently graduated and are interested in systems engineering
- If you are a practicing Systems Engineer with more than five years of systems engineering professional work experience
- If you are a systems engineering leader with recognized systems accomplishments and have many years of systems engineering professional work experience



Any Questions?

Email Contacts

Certification Office:

[certification@ incose.org](mailto:certification@incose.org)

Courtney Wright, CSEP

Certification Program Manager:

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For more information visit:

www.incose.org/certification/

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