

Human Factors

Updating the
Schell model



Human Factors

- people,
- activities
- equipment and
- technology

Human Factors

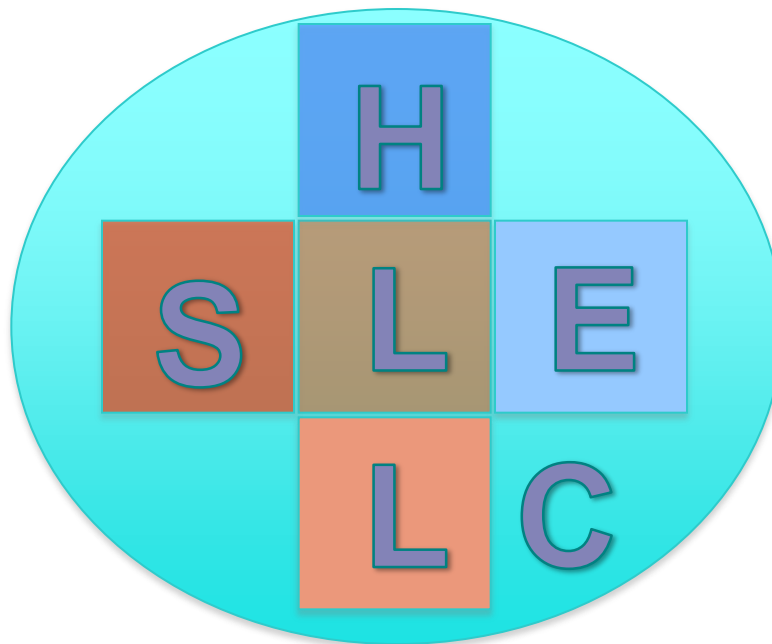
- PERCEPTION





(C) Capt Steve Wright – PACDEFF 2013

Human Factors – SCHELL model





Software ?

Hardware ?

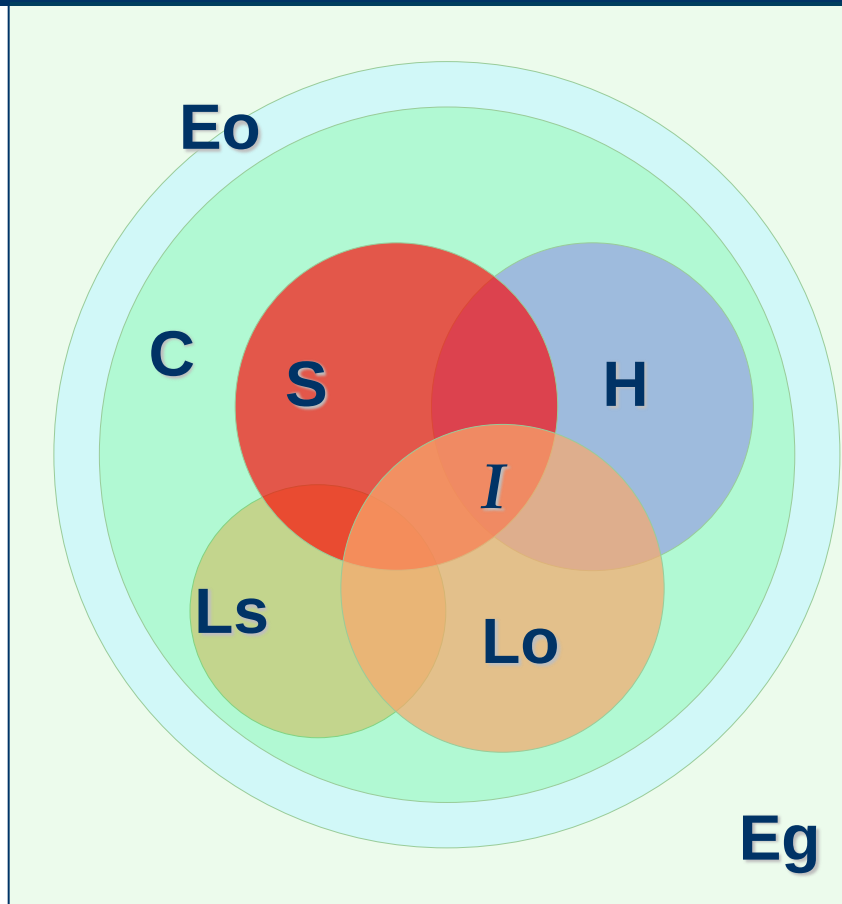
Hardware Software

Human (s) iPad (s)



eschell HF Model

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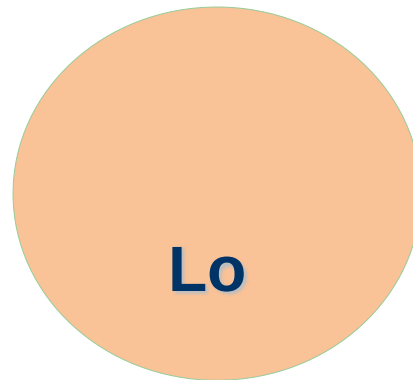


- **Eg** Environment
Global > ('e' world)
- **S** Software / SOPs / manuals
- **C** Culture (safety/society)
- **H** Hardware / displays
- **Eo** Environment (Operational)
- **Lo** Liveware Operators
- **Ls** Liveware (Support)

I interfaces (overlap essential)

eschell HF Model

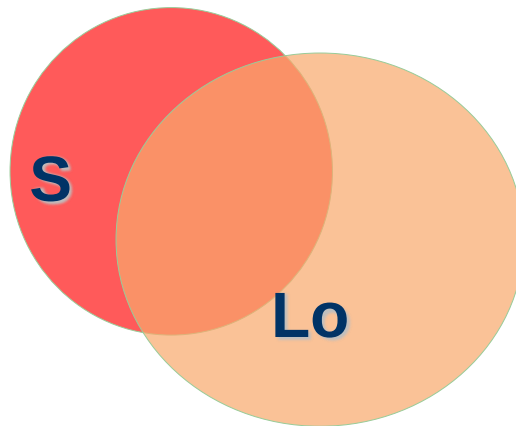
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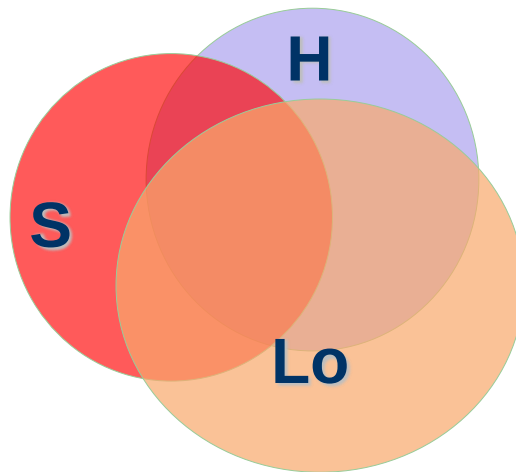
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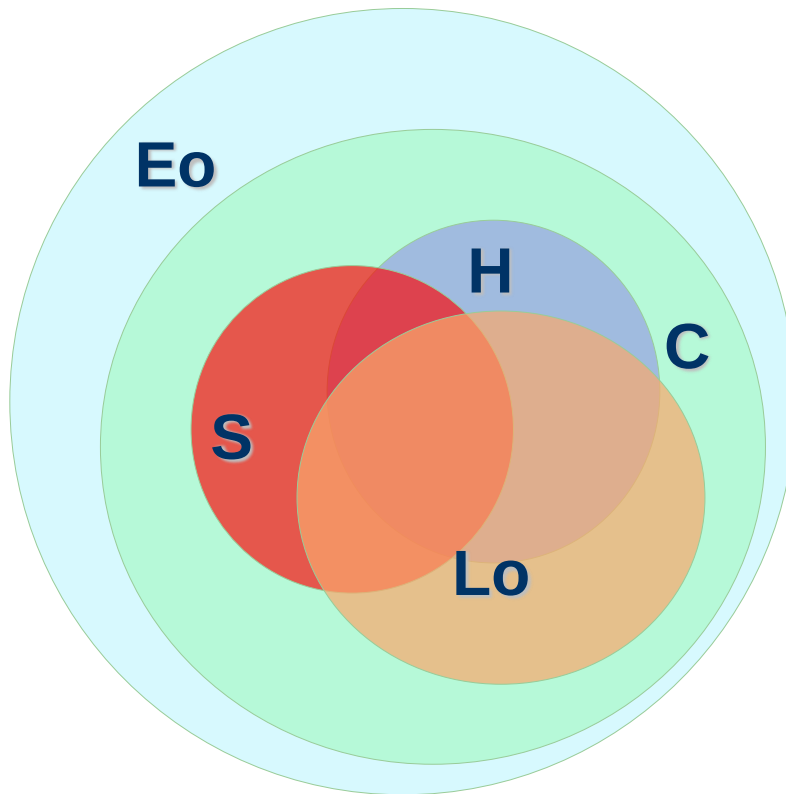
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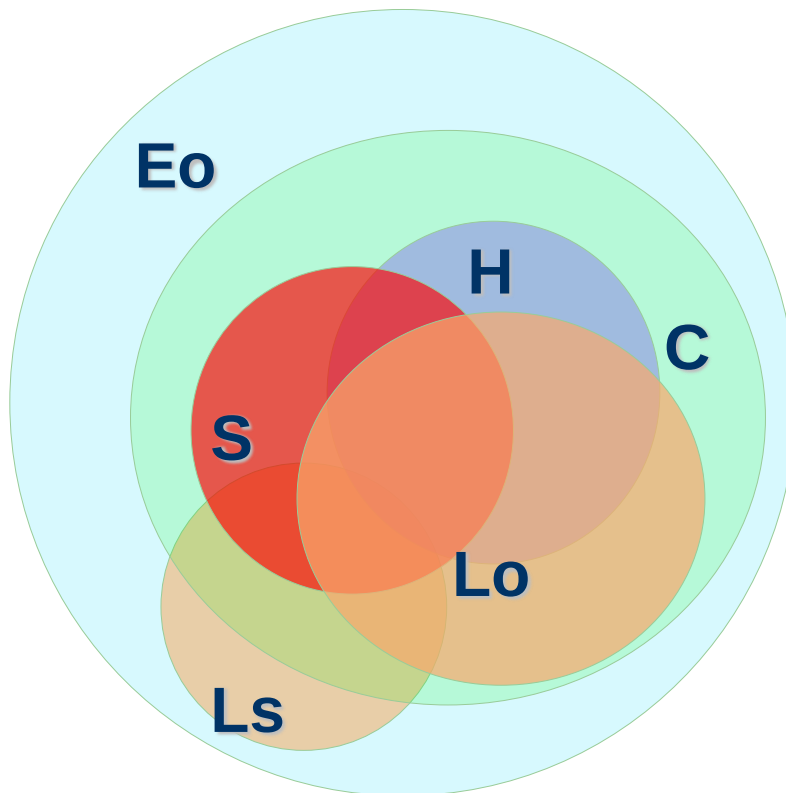
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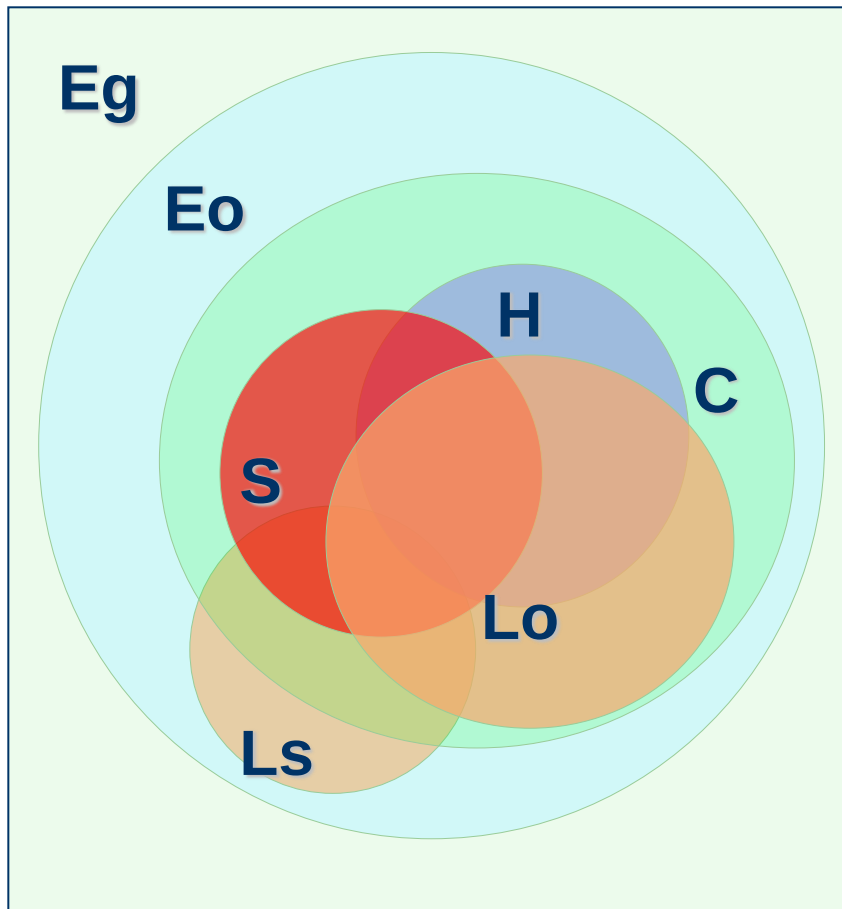
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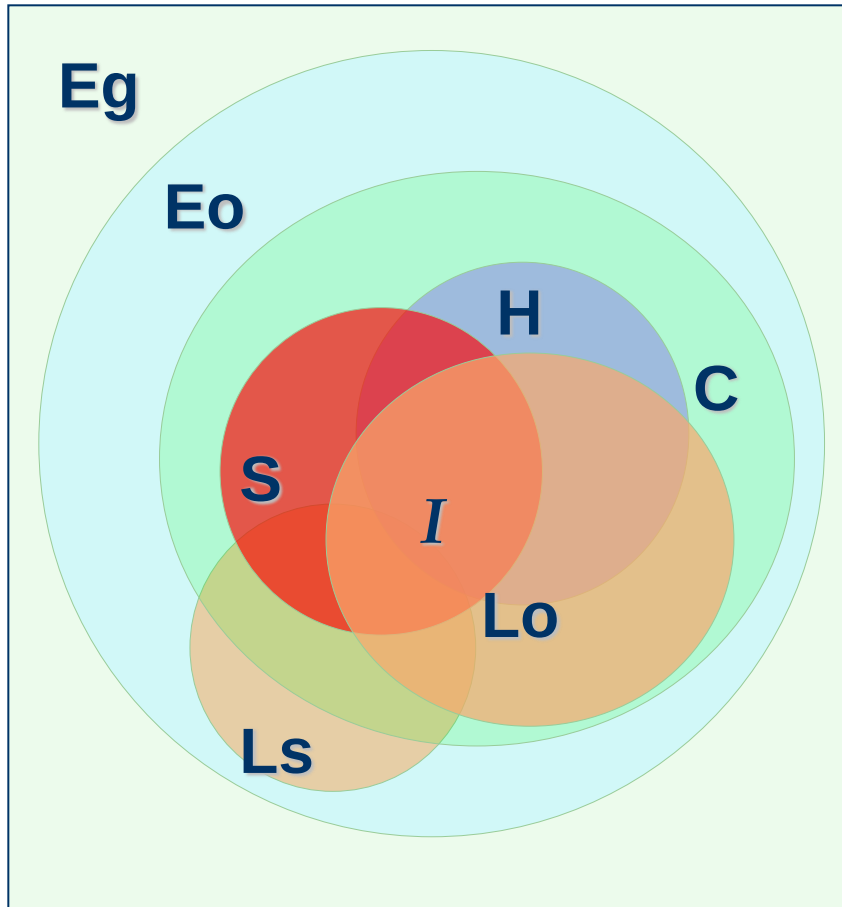
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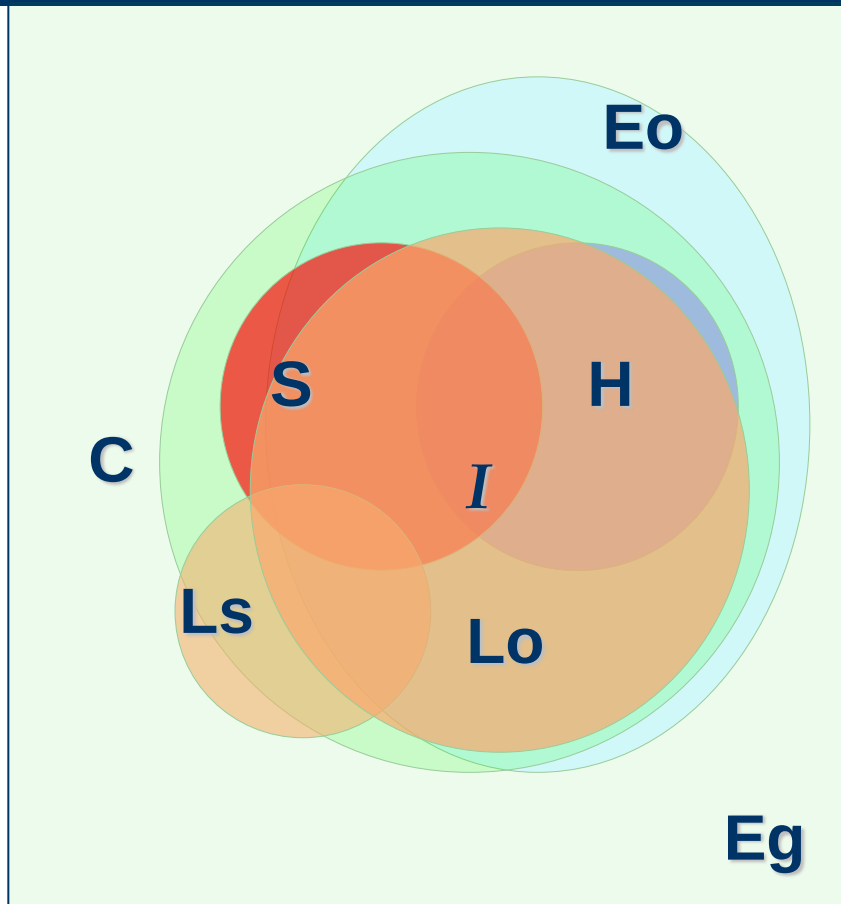
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I interfaces (overlap essential)

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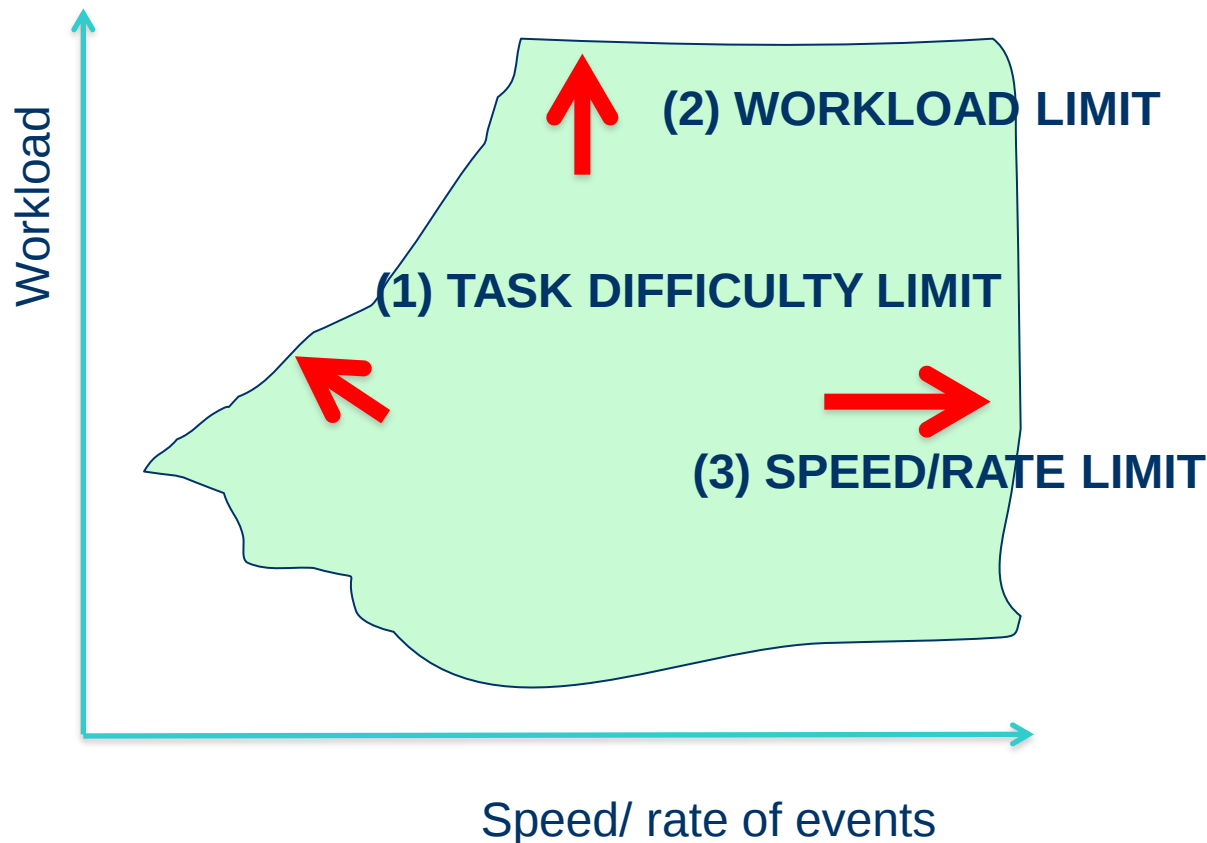
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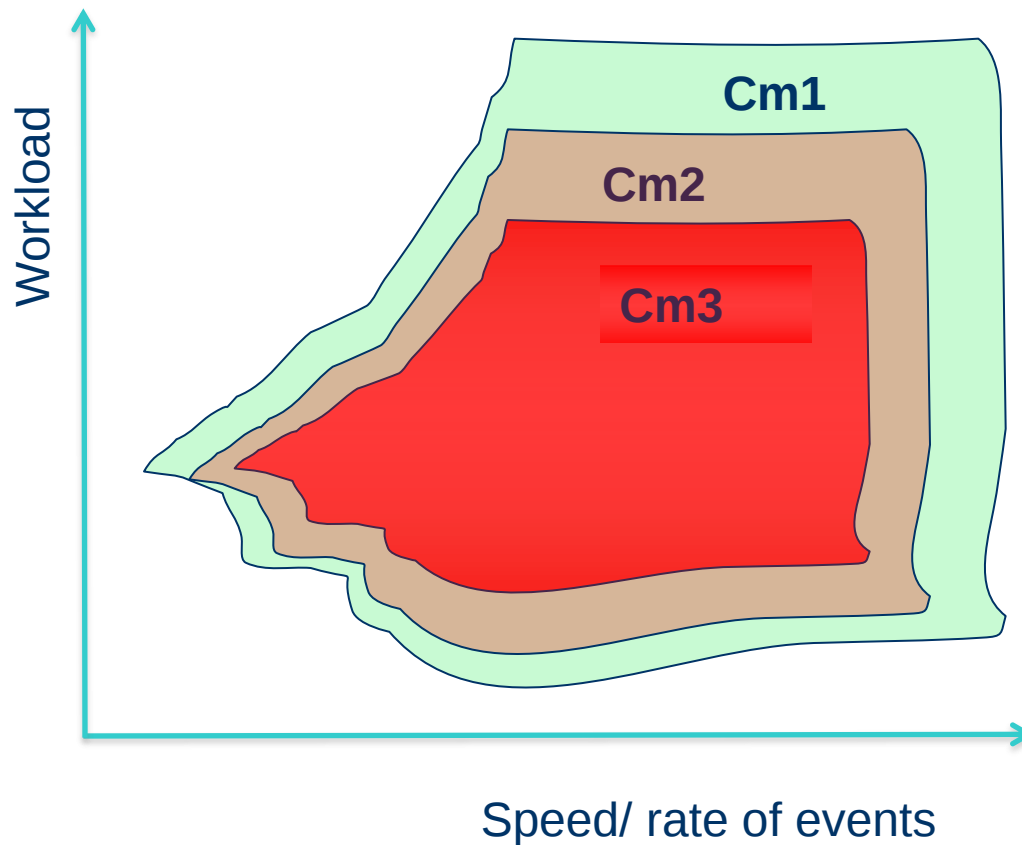
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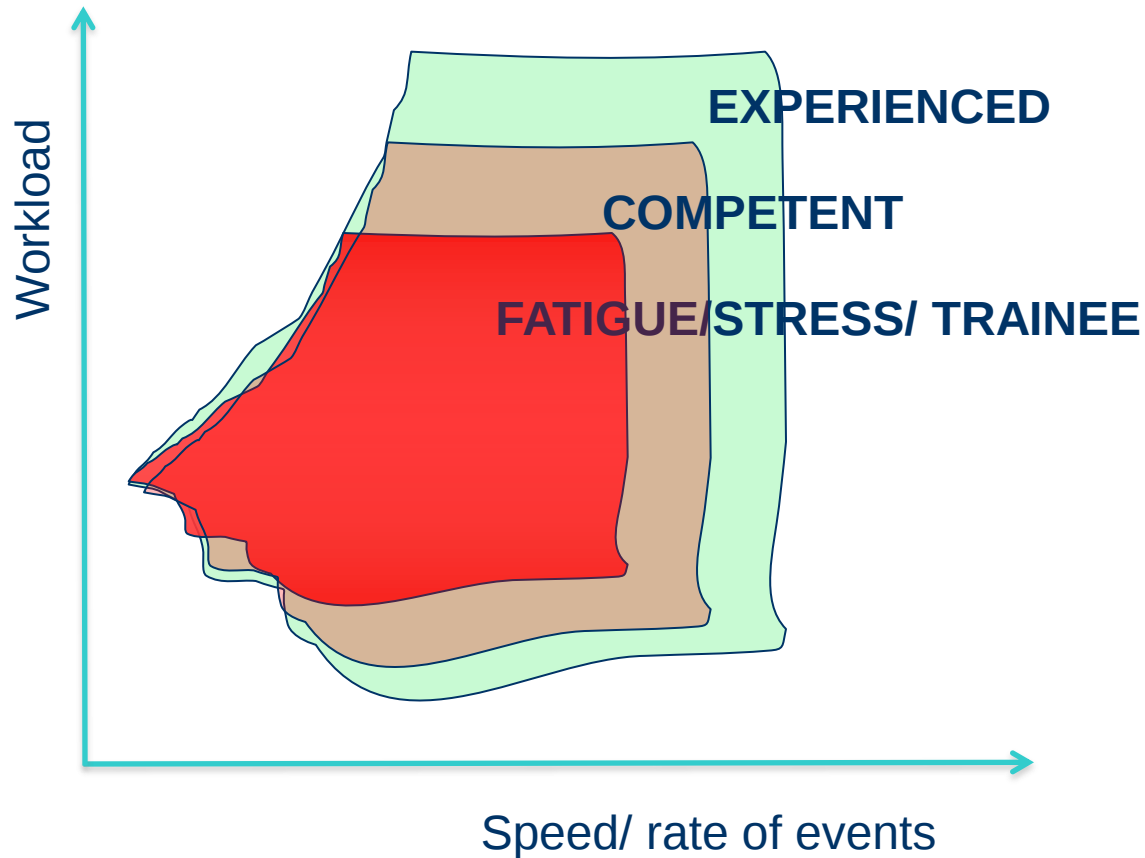
Human Performance Envelope(s)



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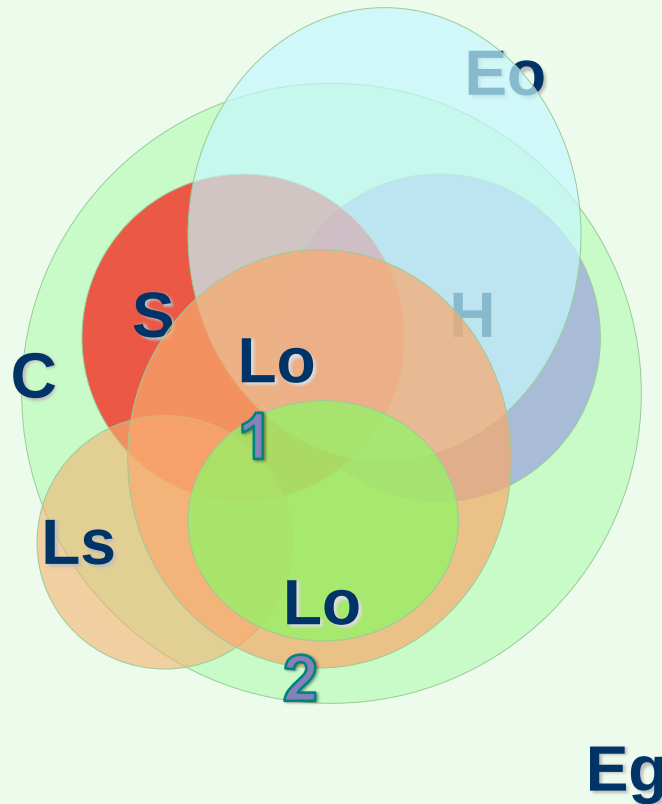


Human Performance Envelope(s)



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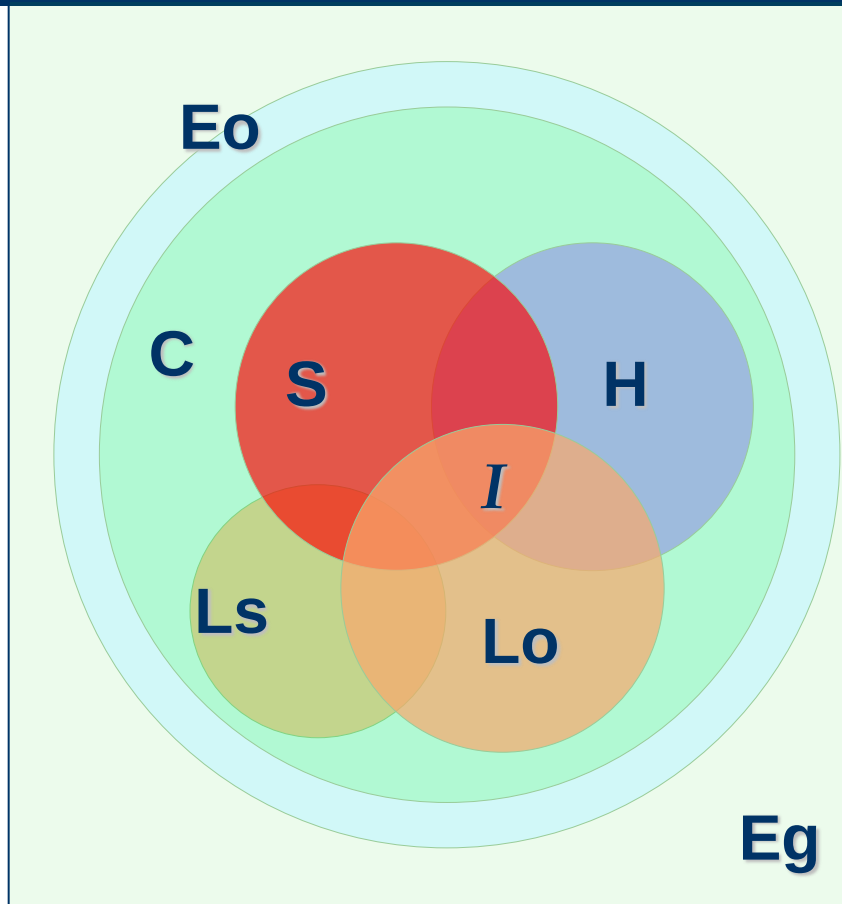


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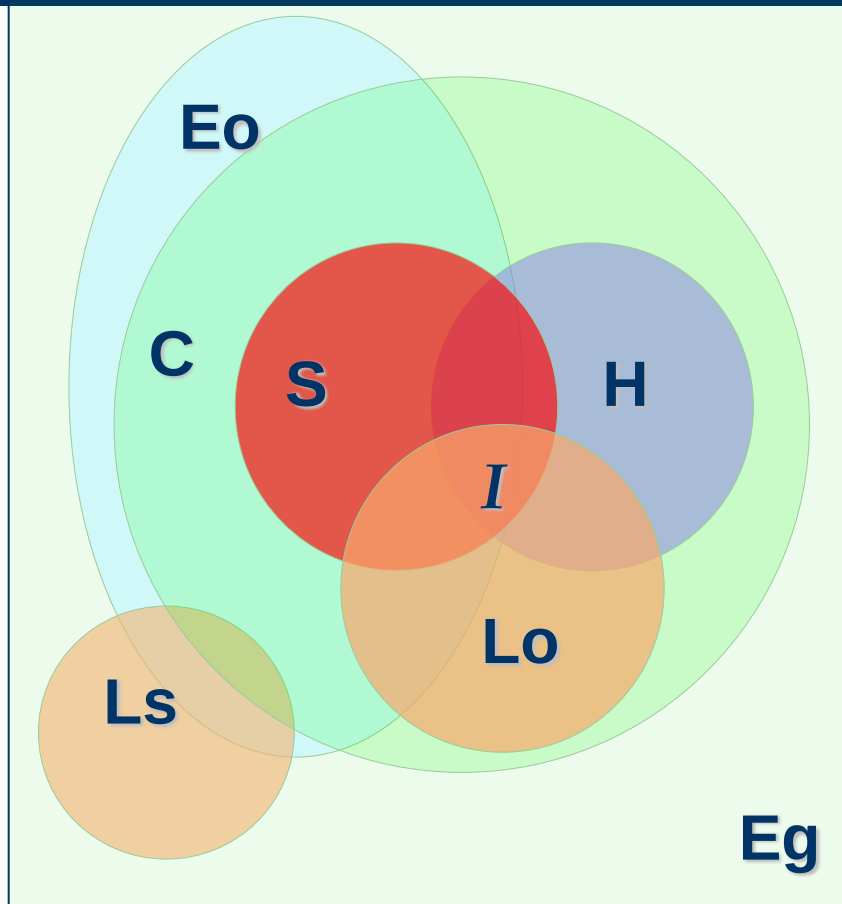
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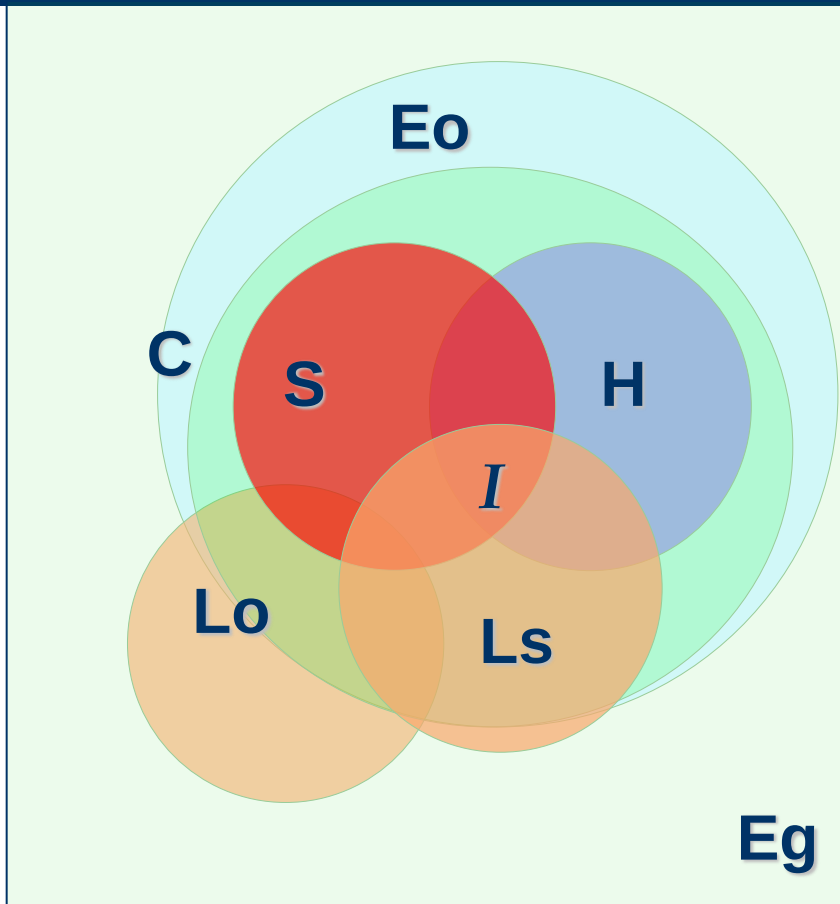
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Example Scenarios



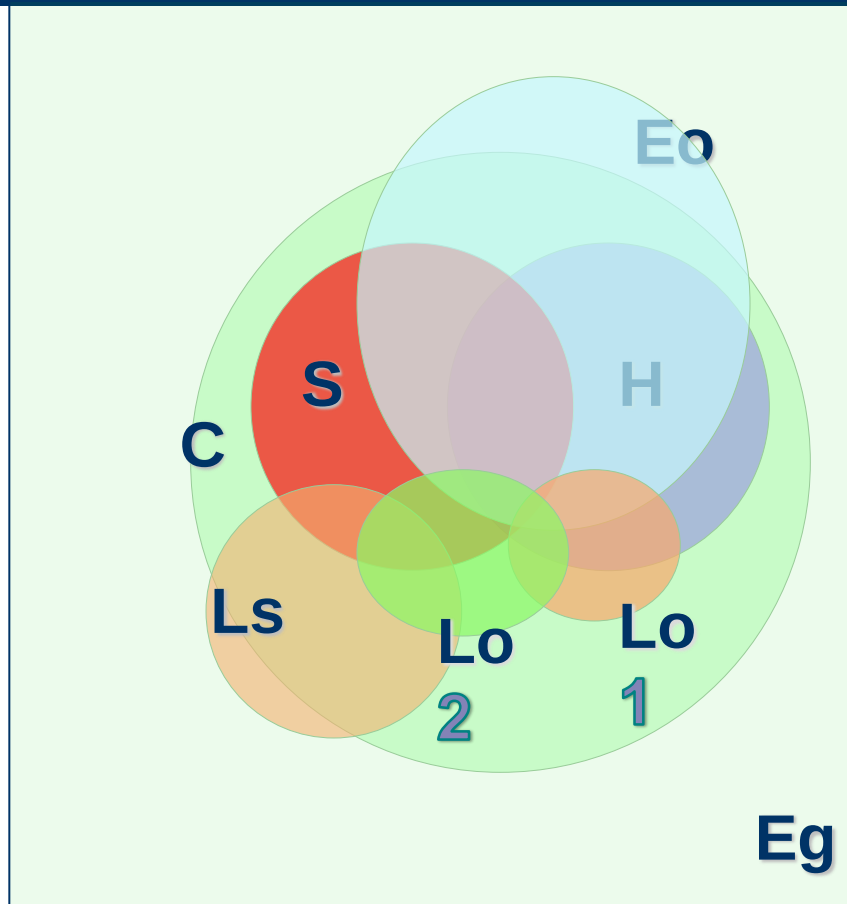
- smartphone use
- smartphone safety

Example Scenarios



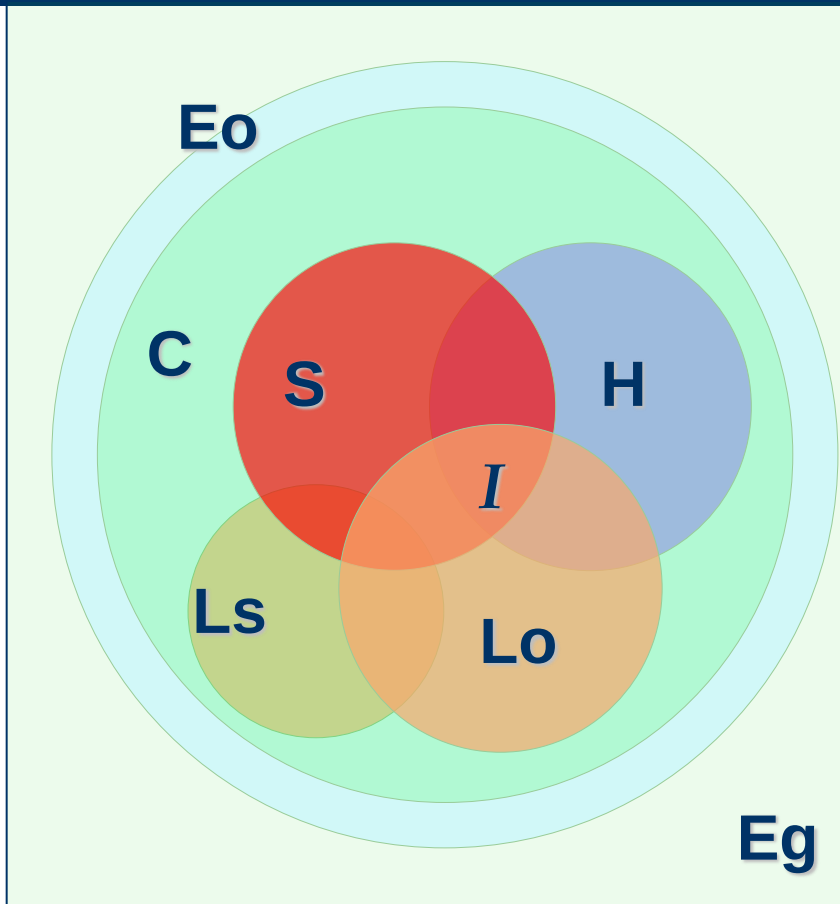
- Dispatchers / Flight Ops support

Example Scenarios



- Air France 447

Discussion ???



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