

SAE G20 status

IESALC Oct 2012

Agenda slide

1. Energy Act

2. Tasking

3. LVO-EFVS

4. SAE G20

5. MALSR

6. PRD-LED

7. Timelines

8. Demonstration

9. Next Steps

10. Summary

The Energy Independence and Security Act of 2007

PAR TYPE 38 HALOGEN REPLACEMENT LAMP PRIZE.—The Secretary shall award a Parabolic Aluminized Reflector Type 38 Halogen Replacement Lamp Prize (referred to in this section as the “PAR Type 38 Halogen Replacement Lamp Prize”) to an entrant that produces a solid-state-light package simultaneously capable of (A) producing a luminous flux greater than/or equal to 1,350 lumens; (B) consuming less than or equal to 11watts.

Tasking

- LED lights with IR signature detectable by EFVS
- Adjust EFVS spectrum to see LED lights
- Collocated IR emitters with LED's
- Alternate power sources activated by EFVS users
- Non LED based lighting seen by EFVS and yet save power

Where is LVO today

Enhanced Flight Vision System



EVS



MUST SEE



HEADS UP

EFVS



- Equivalent vision operations - EVO
- Real time preferred
- Industry drive for SVS and heads down
- FAR 91.175 and AC90-106

Enhanced Flight Vision System using IR



EFVS



Outside View



EVS II

SAE G20

Commenced 2010

Approximately 100 members

Half that active

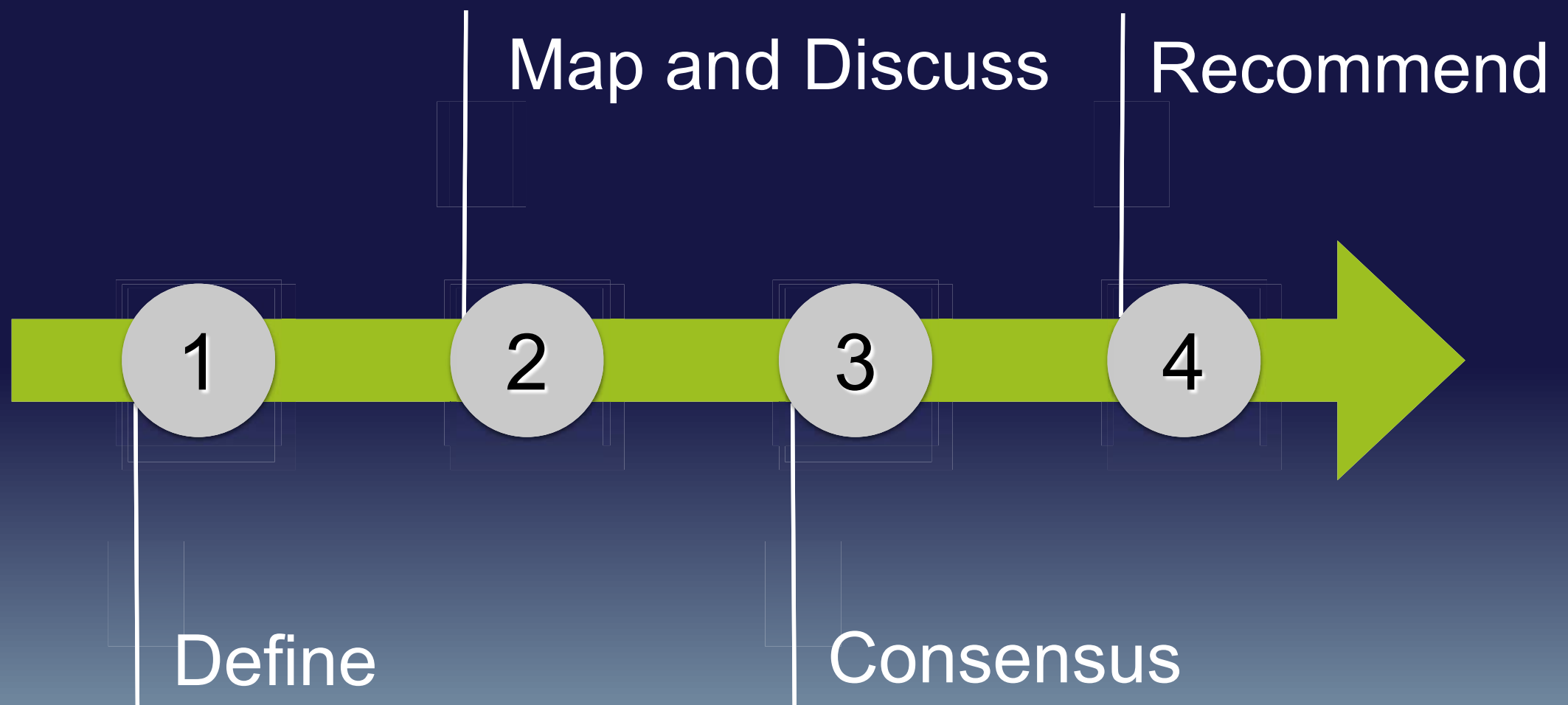
Meet mainly in Washington every ± 3 months

Representatives from FAA, Sensor OEM's,

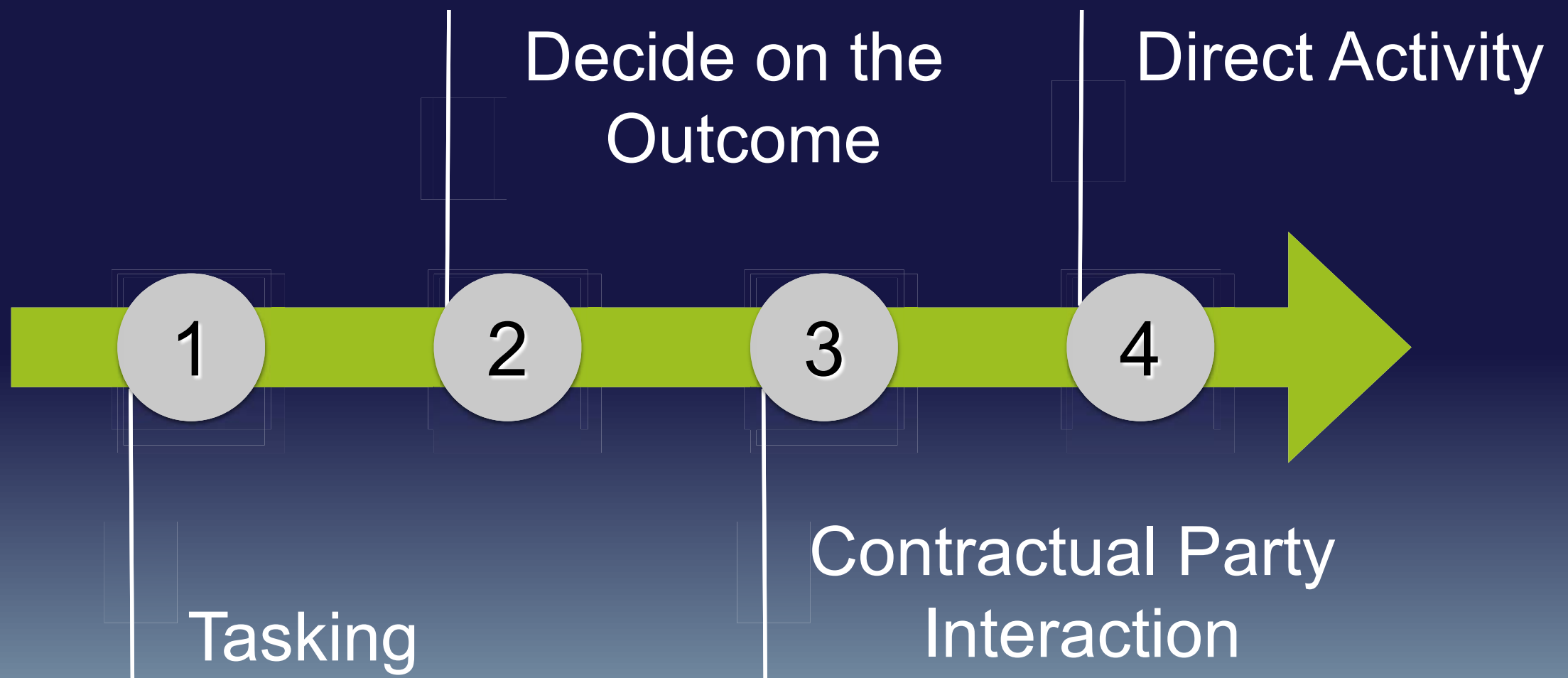
Lamp OEM's, Users of EFVS and other

SME's.

What we do...



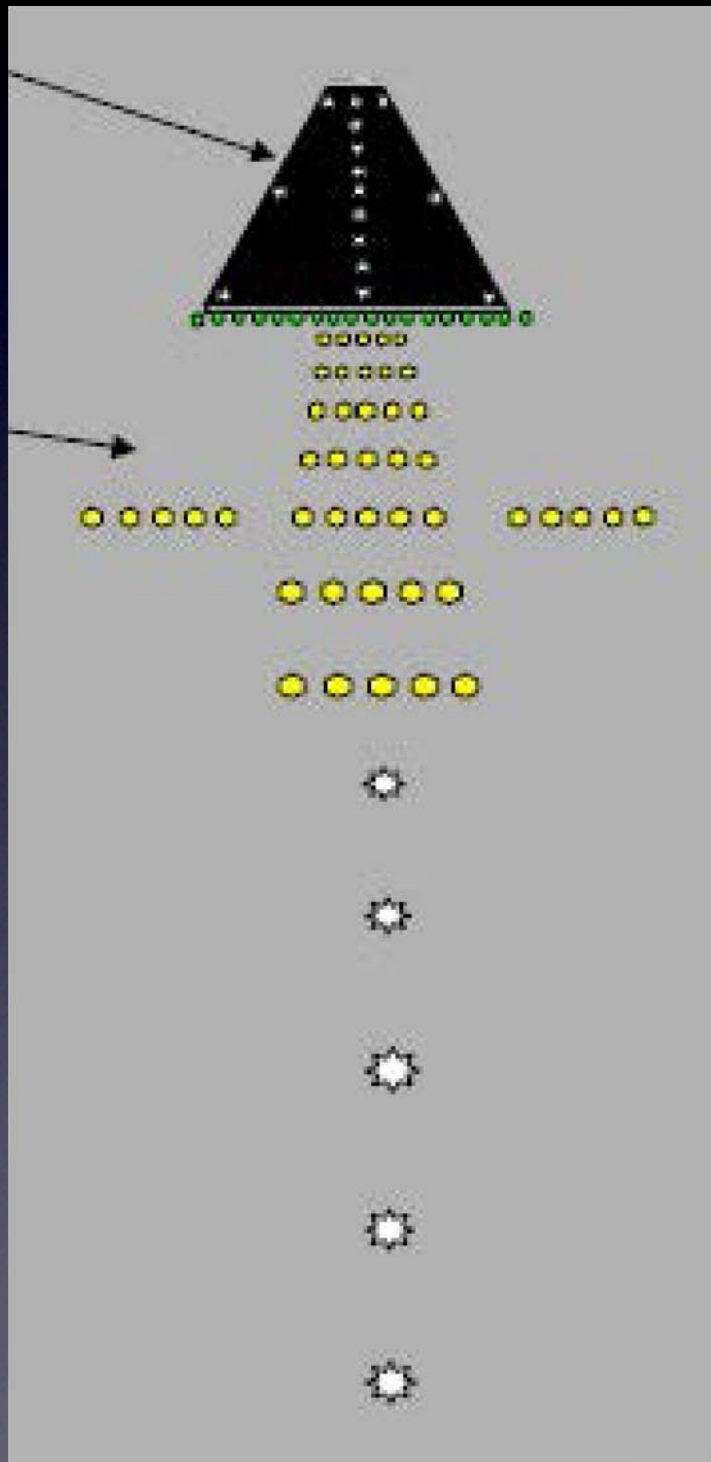
What we do not do...



Typical MALSR

Runway
Lights

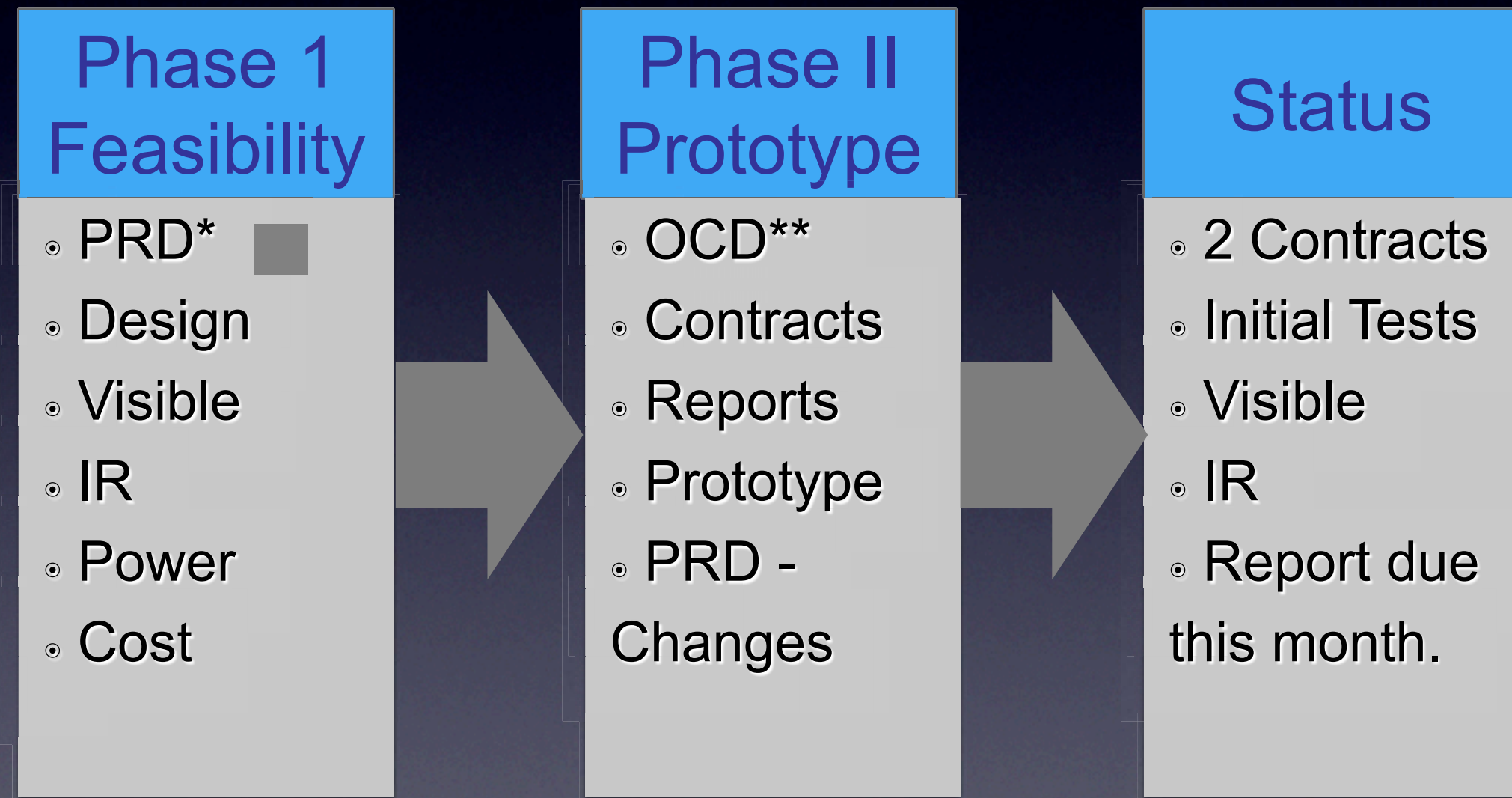
MALSR
Lights



- 18 PAR 56 green lamps at threshold
- 9 light bars with 5 PAR 38 lamps each
- Sequenced flashers
- 2400 feet total distance from threshold

PAR 38 Lamps x 45

PRD-LED-001



* Performance Requirement Document

** Operational Capability Development

PRD-LED Timeline

8/11 – 7/12 Prototype Development (330 days)

7/12 – 8/12 Prototype Testing (45 days)

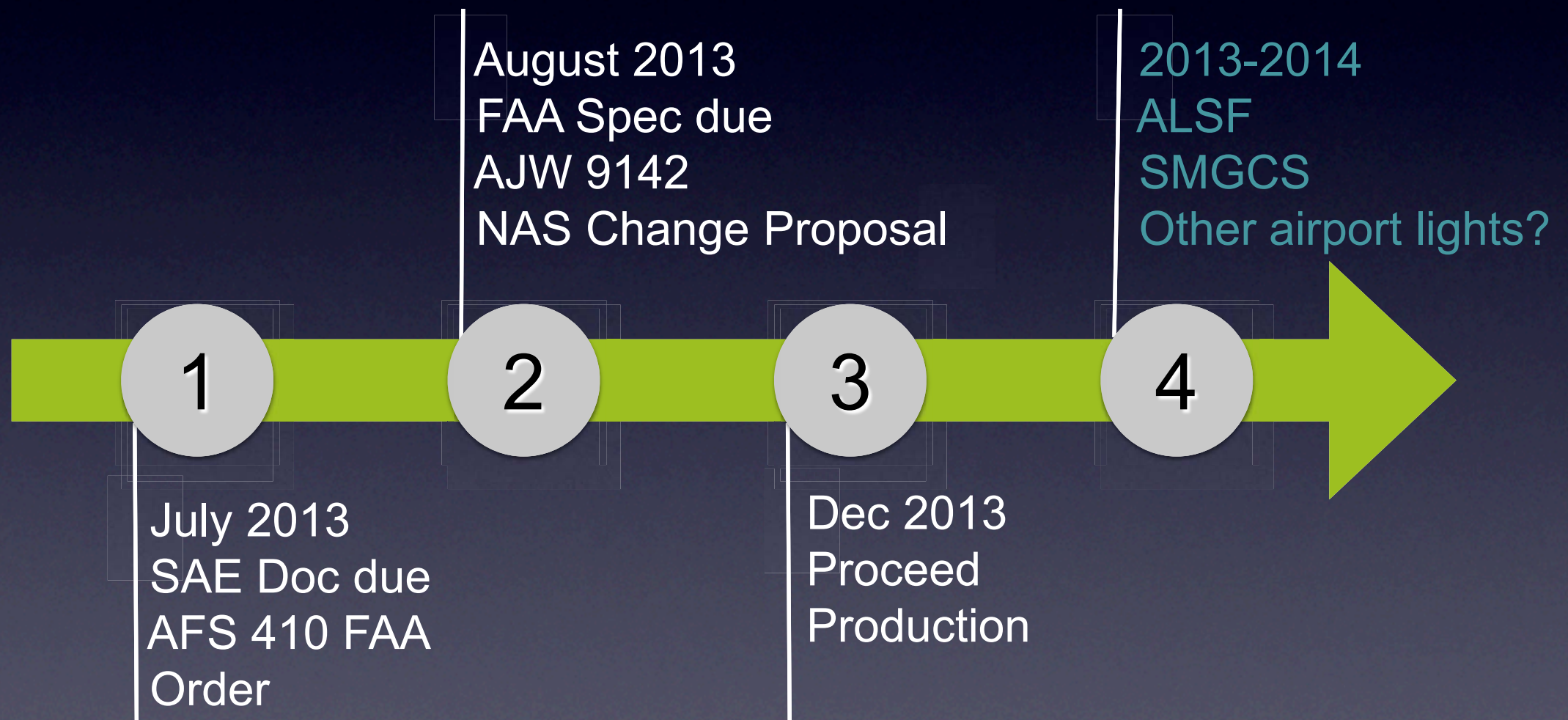
7/12 – 8/12 EFVS Capability Test (30 days)

8/12 – 10/12 Fixture for OCD (75 days)

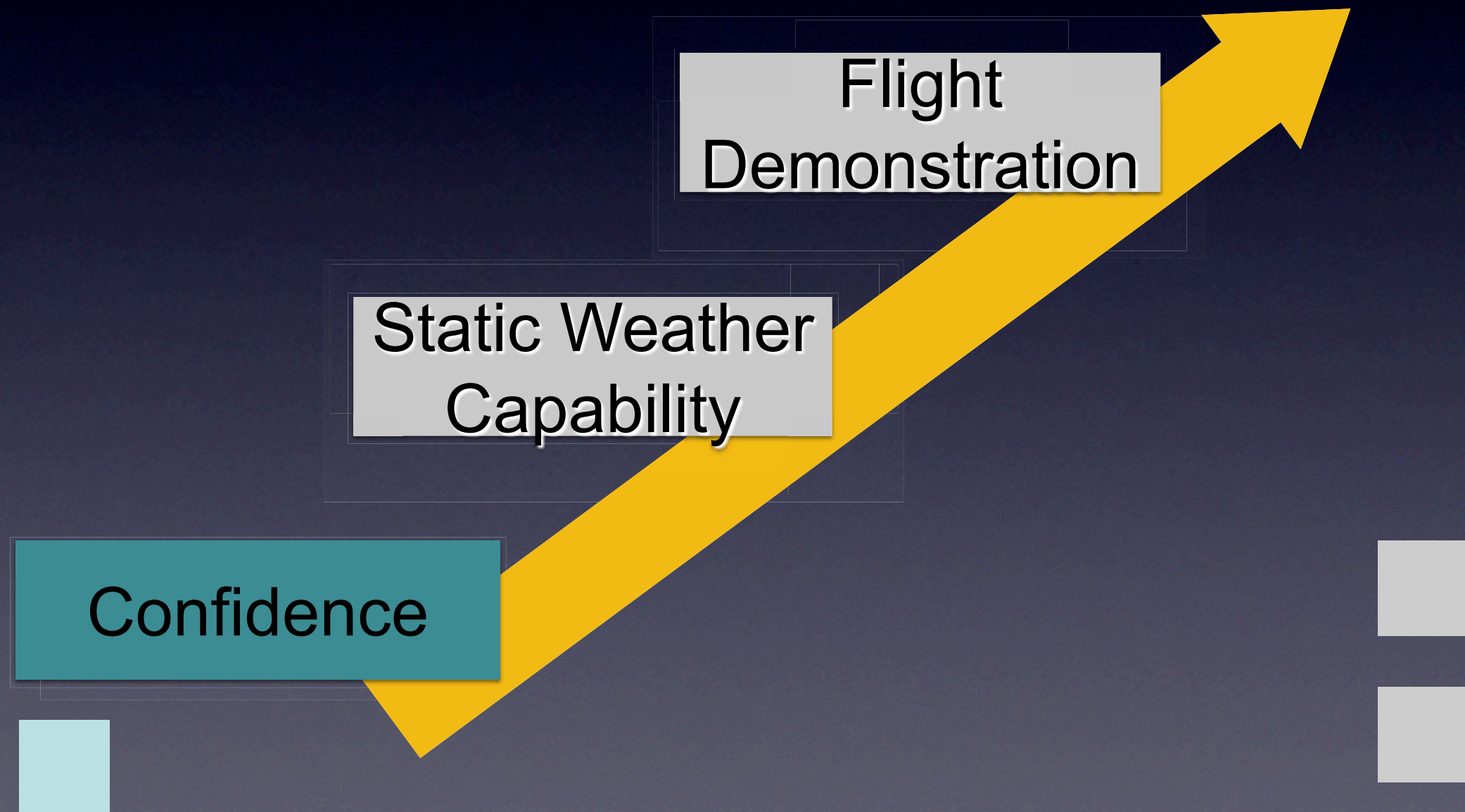
10/12 – 2/13 Conduct OCD* (120 days)

* Weather Test and Flight Test?

MALSR PAR 38 and 56 Timeline



IR-LED EFVS Demonstration


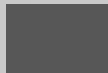


Next Steps




Summary

Current

- 2 lamp solutions
- Confidence test
- SAE ST-IRE Needs Statement (9W) 
- FAA AC Guidance
- FAA PRD-001 (8.2W)
- SAE Report – tasking response commenced.
- SAE 'Plan B' 

Planned

- Lamp selection
- Static test
- Flight test
- Satisfy FAA AC
- Satisfy visible
- Satisfy FAA AJW
- Implementation
- SMGCS 

Q&A