



Improving Worker Safety

A measurement proposal

Overall principle:

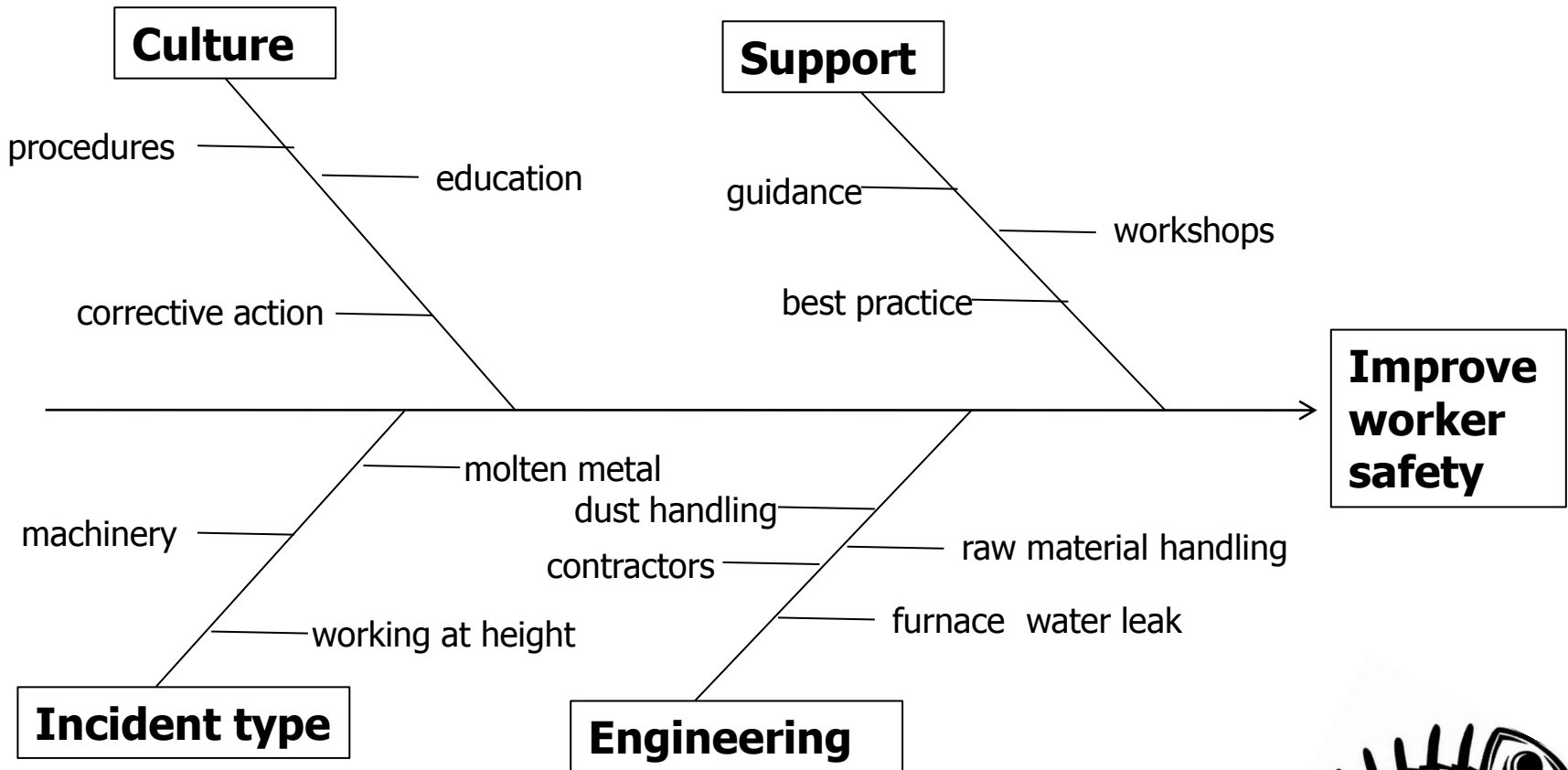
- First – we need to be able to measure something in order to improve it
- What to measure?
- How to measure it?
- Set target for improvement
- Managed by the IMnI – industry wide and confidential.



Keep it simple:

- Ishikawa diagram (cause and effect) or 'fishbone' diagram
 - why do we have accidents/incidents?
- You need to determine causes and effects for your own company





What to measure?

Propose:

- Lost-time incidents

Defined as “ any incident* that results in ≥ 1 day of absence”.

(*blue collar and white collar included)

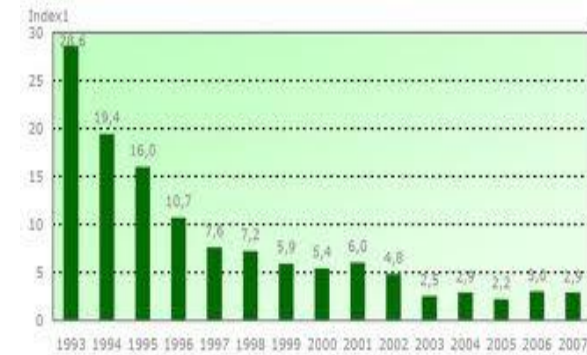


How to measure?

Propose:

- Lost time incidents per 1,000 employees

i.e. need to report number of incidents and number of employees per member per year



Example:

| <u>Member</u> | <u>Incidents</u> | <u>Employees</u> |
|---------------|------------------|------------------|
| A | 2 | 500 |
| B | 5 | 700 |
| C | 1 | 200 |
| D | 6 | 600 |
| Totals | 14 | 2000 |

IMnI reports: industry @ 7/1000

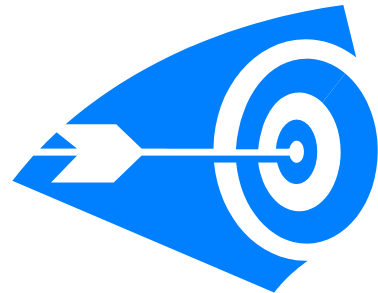


Target:

Need to set baseline: are 2009 or 2010 industry figures readily available?

Target: reduce by 20% over 5 years
– is this achievable? realistic?

Benchmark: aluminium industry



Benchmark: AI study

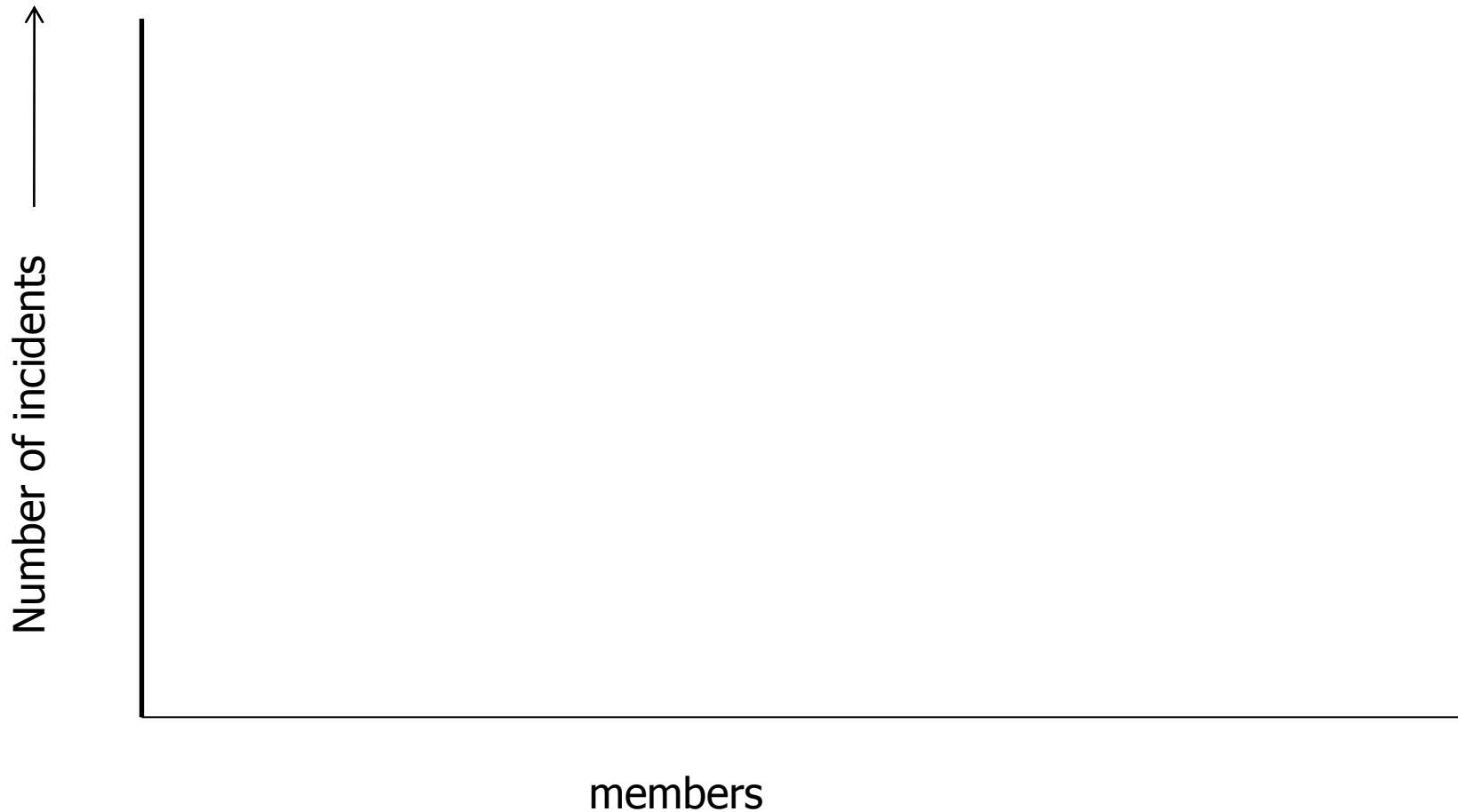
Launched by ALFED (Aluminium Federation)
AI industry reported 24/1,000 in 2006

Target: to reduce by 10% in 3 years
Global AI industry (members/non-members)

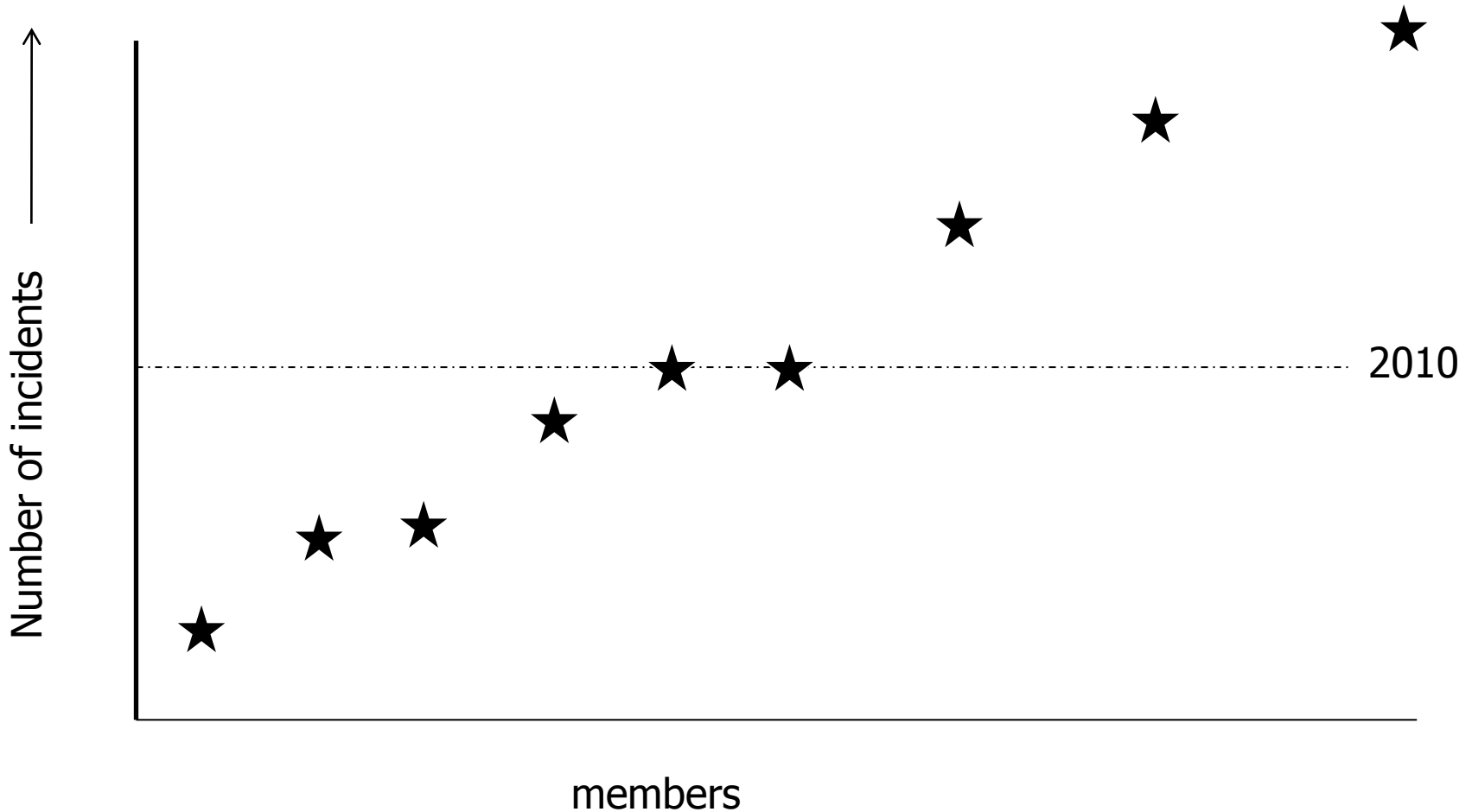
achieved 18/1,000 in 2010.



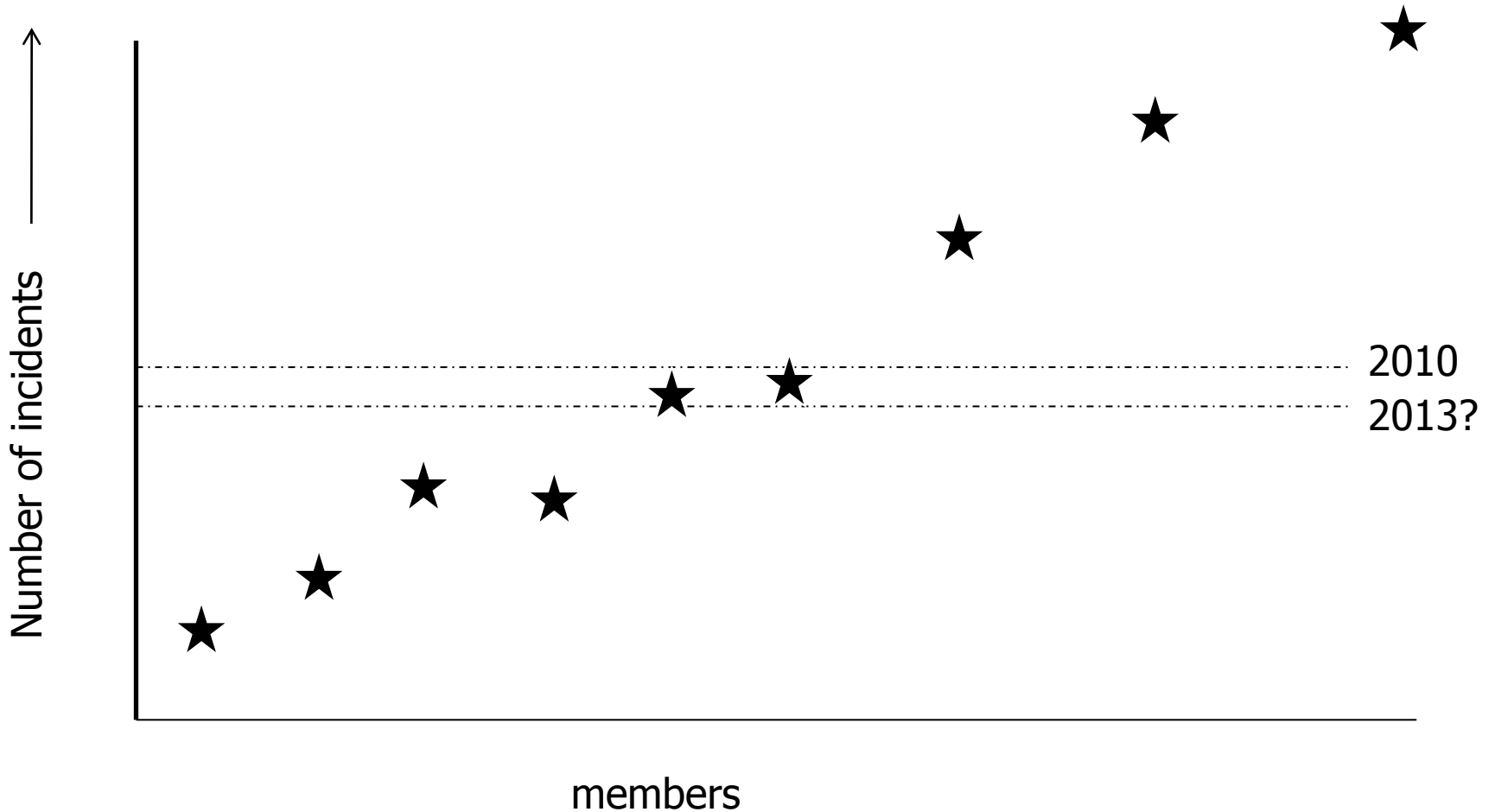
Possible long-term scenario



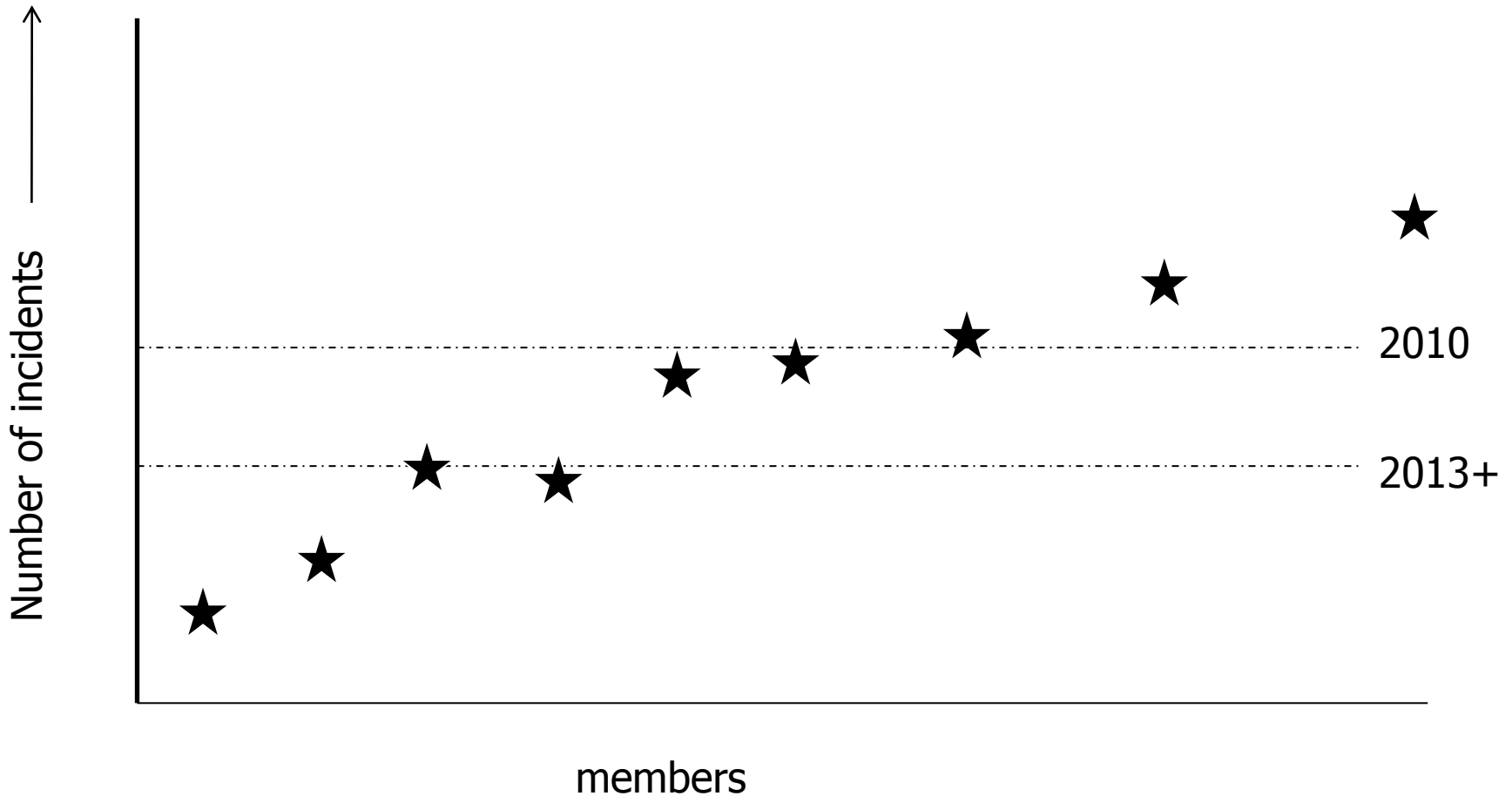
Possible long-term scenario



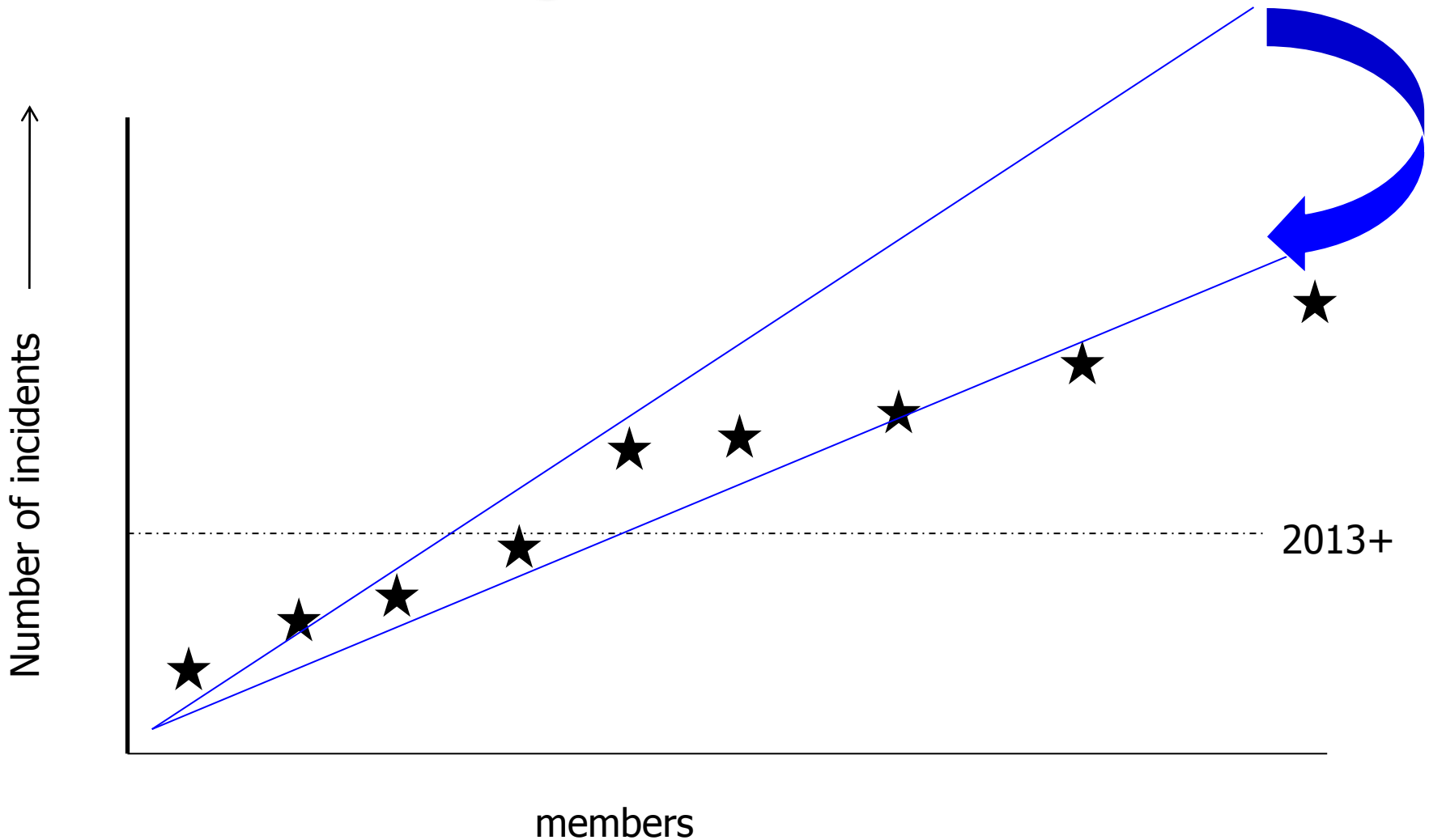
Possible long-term scenario



Possible long-term scenario



Possible long-term scenario





Summary: MIMS Initiative?

Global Mn industry worker safety measure does not currently exist.

Should we have one? Yes, otherwise global safety will not improve (fast enough)

Propose to report “incidents per 1000 employees”

Managed through IMnI (to maintain confidentiality)

Manganese Industry Made Safer – M.I.M.S.



Thank you..

questions / discussion?