



ECCE 10+ECAB 3+EPIC 5
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Lee Allford, Operations Manager European Process Safety Centre (EPSC)



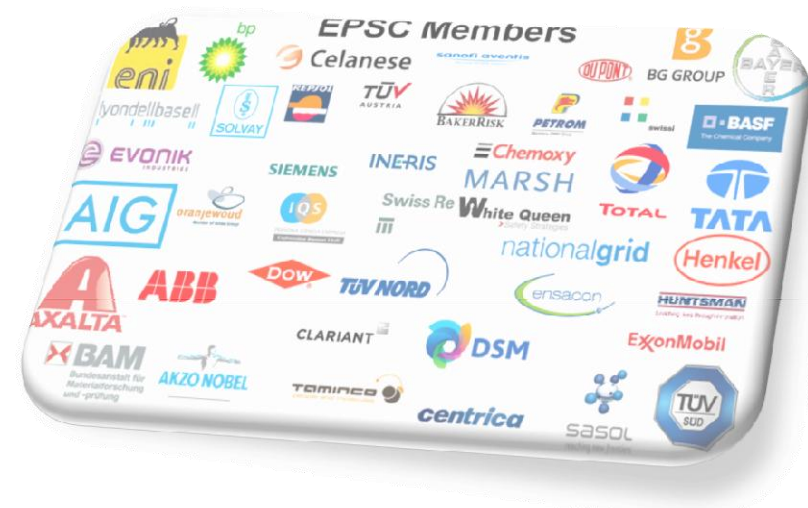
The internal auditing of process safety

False Sense of Security ?



EPSC: What?

- A company member network to develop and promote best practice in the field of process safety
- Established by the EFCE in 1992
- Hosted by IChemE



EPSC: Outputs

- Programme of activity for and with members
- Internal reports produced by EPSC staff or commissioned via third party
- Representation in EU working groups in safety related fields
- Publish books through IChemE mainly commissions or English translation of foreign language text (e.g. French, Swedish)

Auditing in the dock?



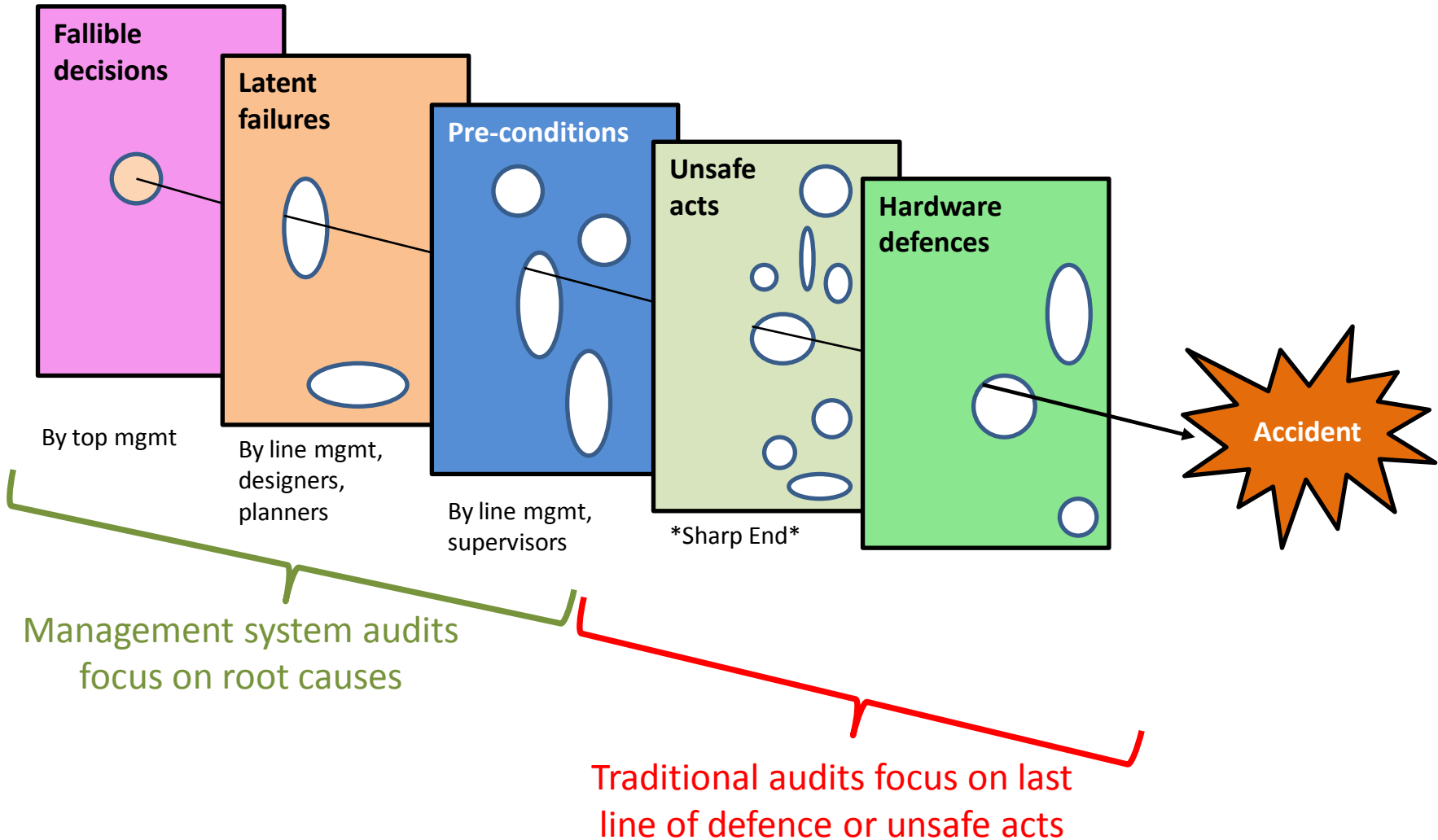


Date	2005
Country	USA
Fatalities	15
Injuries	105



Date	2005
Country	UK
Duration	3
Injuries	43

Auditing the Swiss Cheese Model



Auditing Frailties

- Pre-occupation with audit scoring
- Lack of worker engagement
- Confusion of audit criteria
- Lack of auditor independence
- Proliferation of audit paperwork

Audit Choreography?



Definition

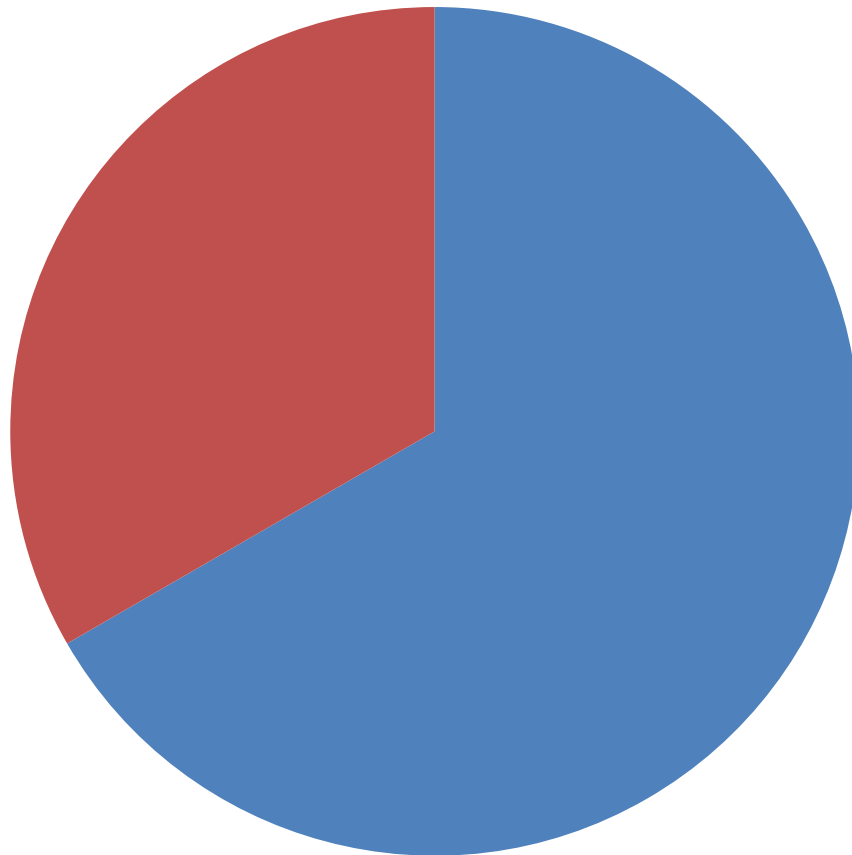
Internal auditing	External auditing	
	Customer auditing	Third party auditing
Sometimes called first party audit	Sometimes called second party audit	E.g. for regulatory, certification and insurance purposes



Increasing auditor independence
Decreasing auditor familiarity

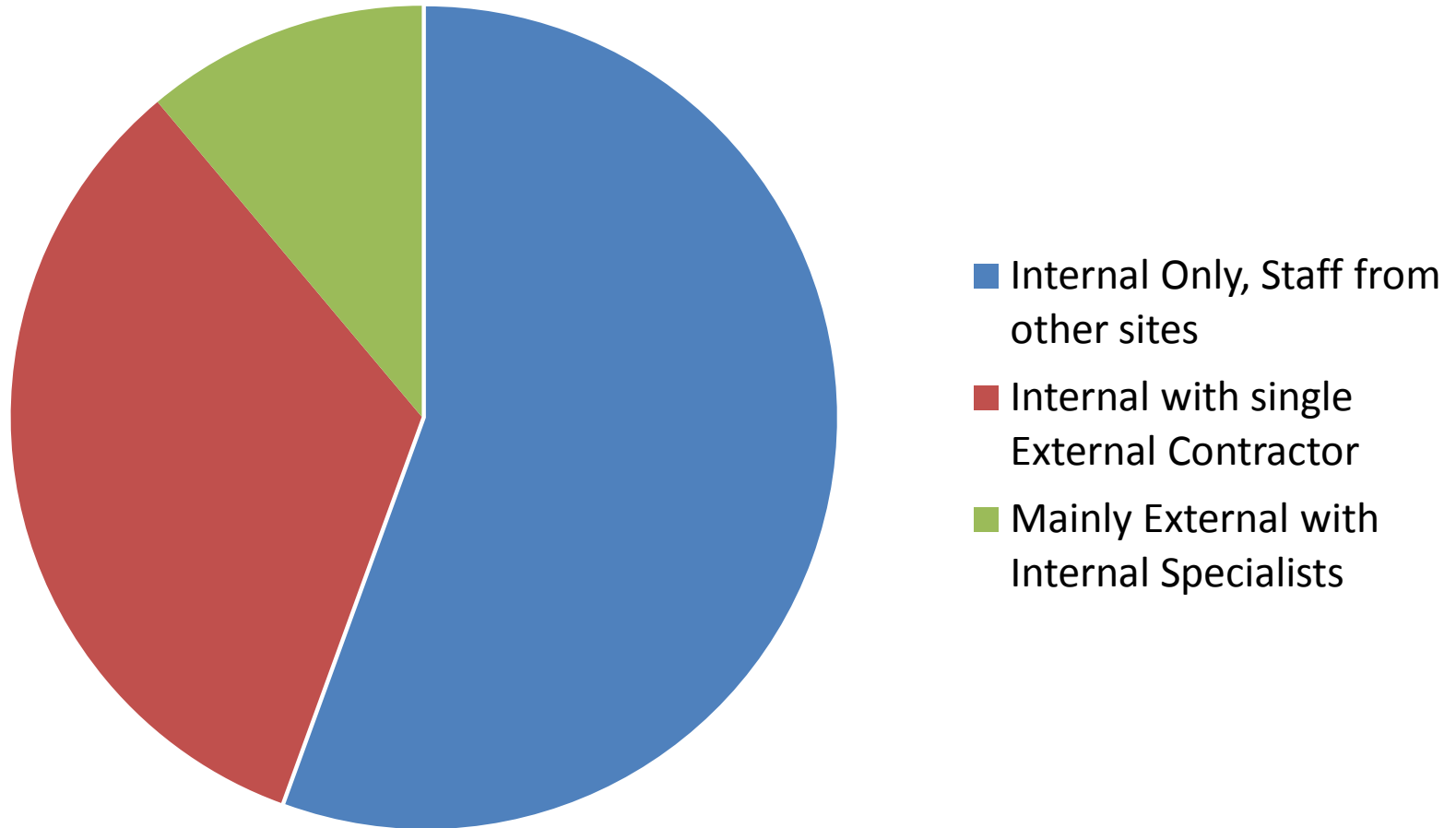
The organisation of process safety audits

N=18



- Process safety part of SHE Audits
- Dedicated process safety audits

Audit team composition



Internal Auditors

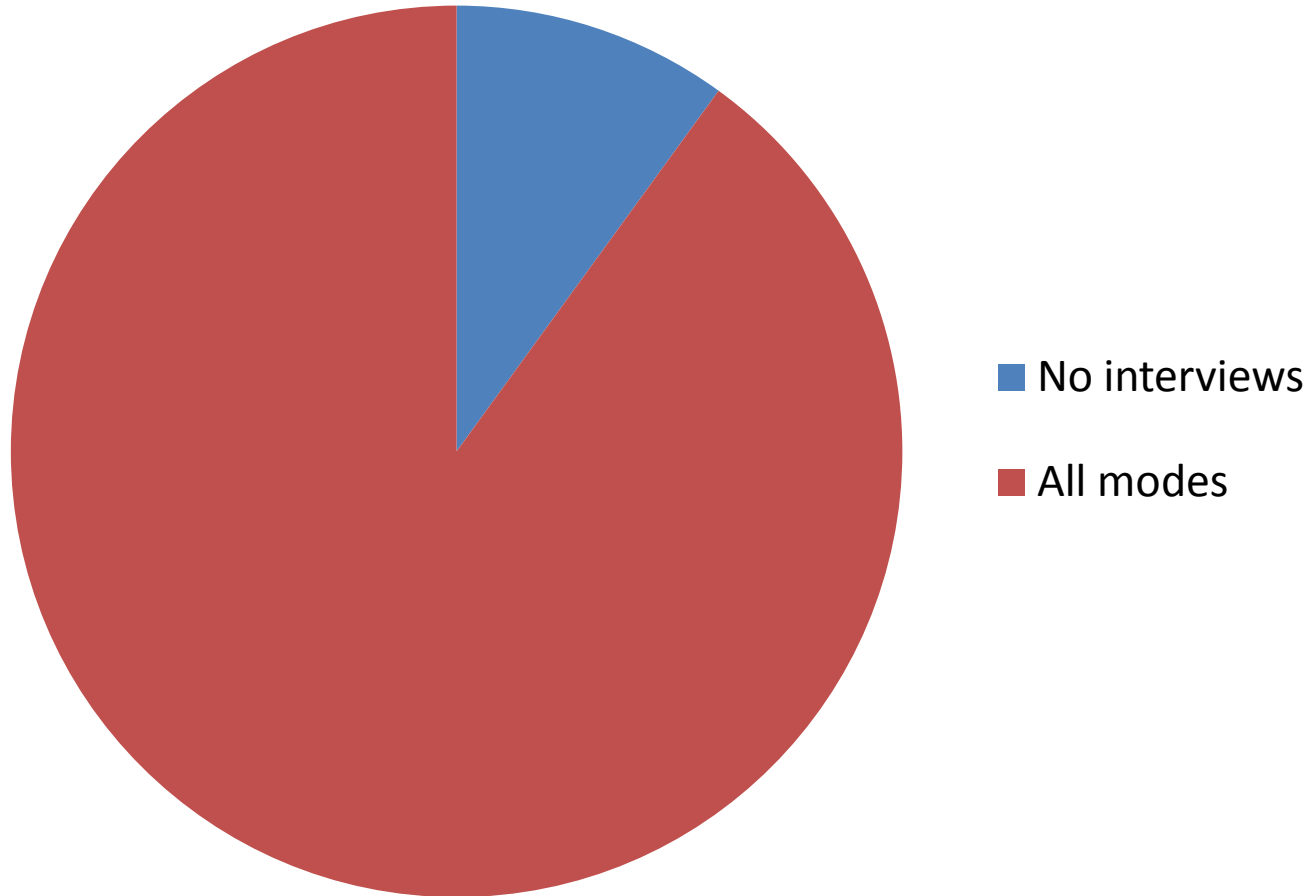
ADVANTAGES

- Auditors know the business and so what can realistically be achieved
- Improves ownership of issues found
- Builds competence internally

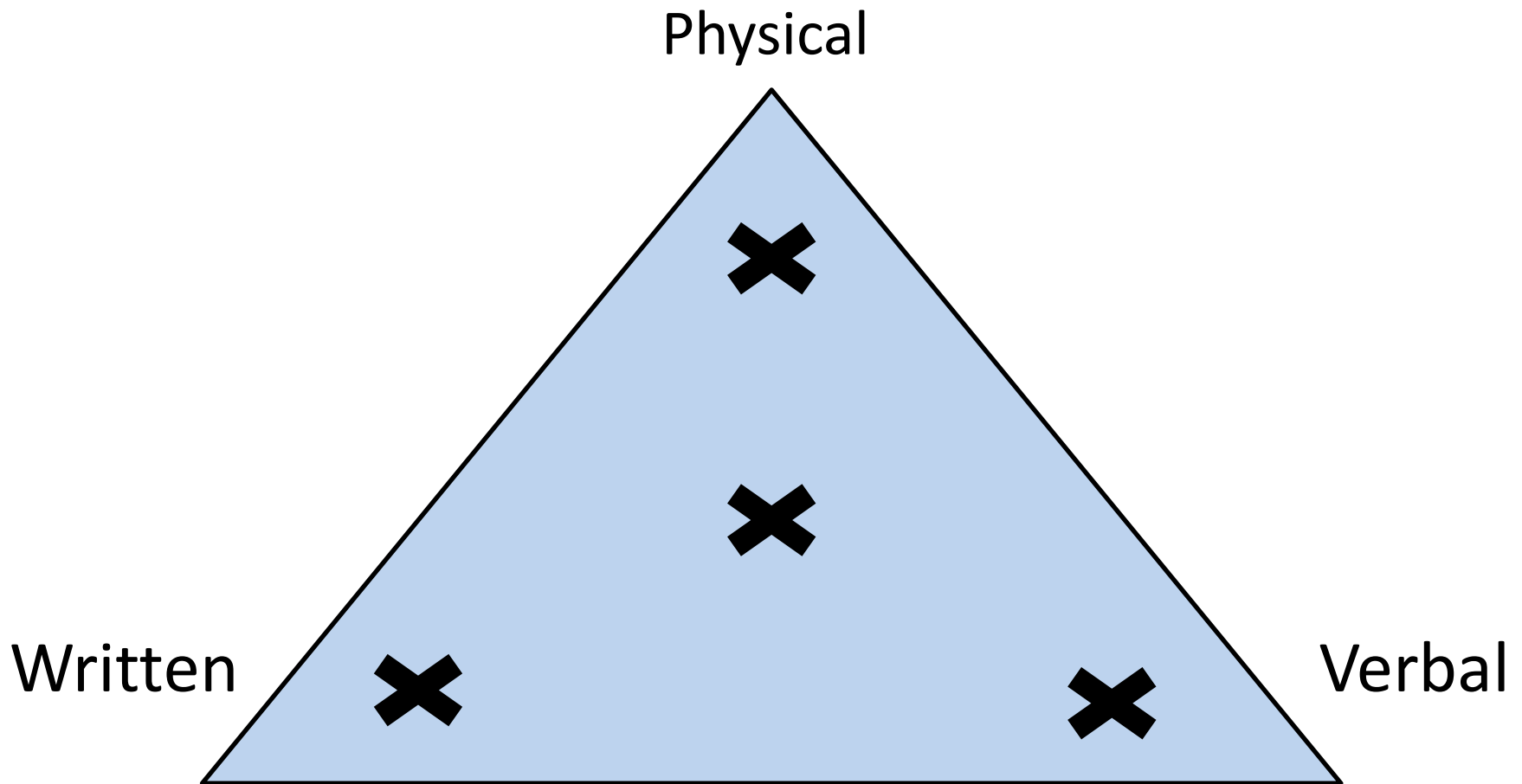
DISADVANTAGES

- Auditors may not notice certain issues
- Auditors may not possess auditing skills and may need training
- Auditors are not independent and may be subject to internal influences

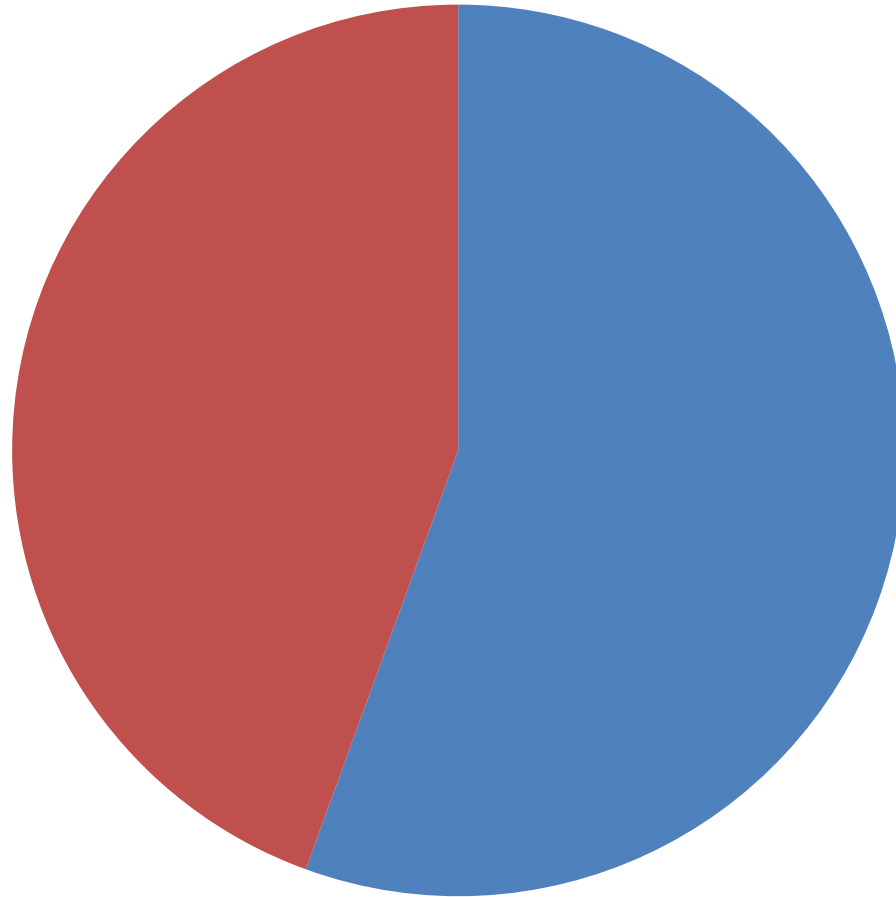
Methods of gathering audit methods



Collecting audit evidence

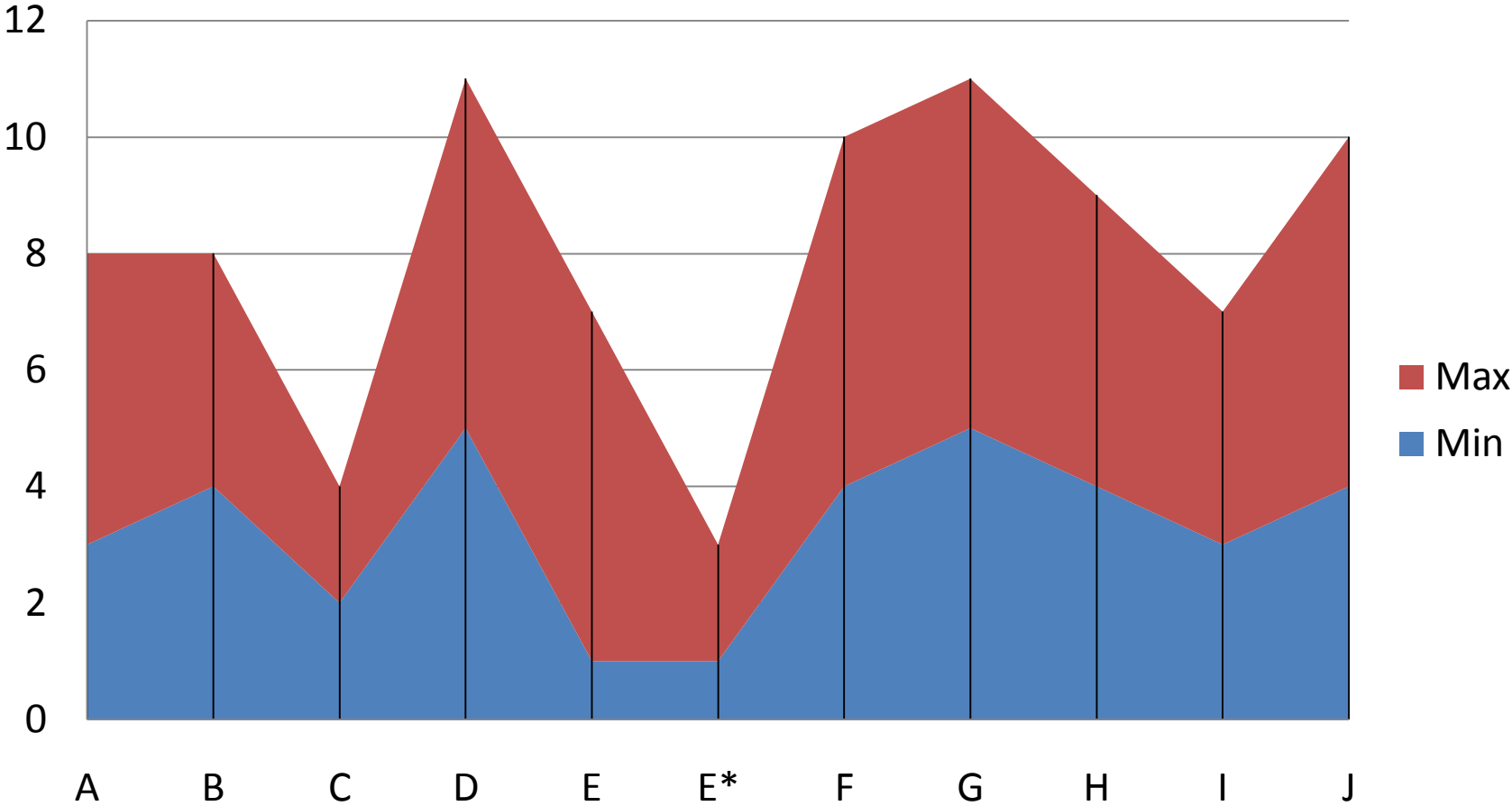


Benchmarking safety audits processes with peers



- Formal benchmarking with peer companies
- Benchmarking informal or not implemented

Audit team size range



Perceptions of auditors





Thank you