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LESSONS LEARNT IN DEVELOPING EFFECTIVE PERFORMANCE MEASURES FOR CONSTRUCTION SAFETY MANAGEMENT

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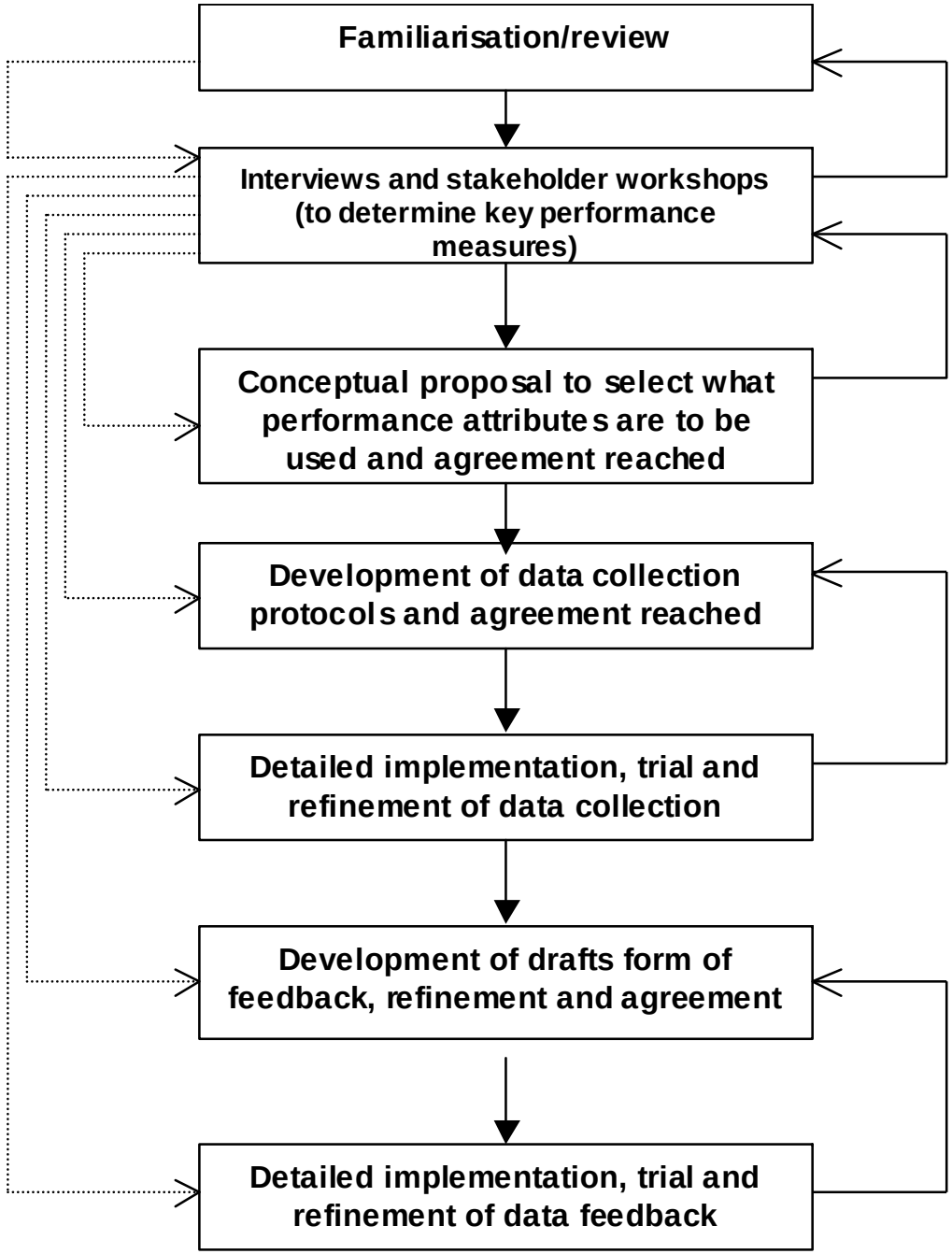
PM - Research questions

- What to measure ?
- How to measure it ?
- How to present the findings ?

Things we measured

- Compliance with the management system ?
- Management response to error ?
- Overall improvement being generated ?

Process model



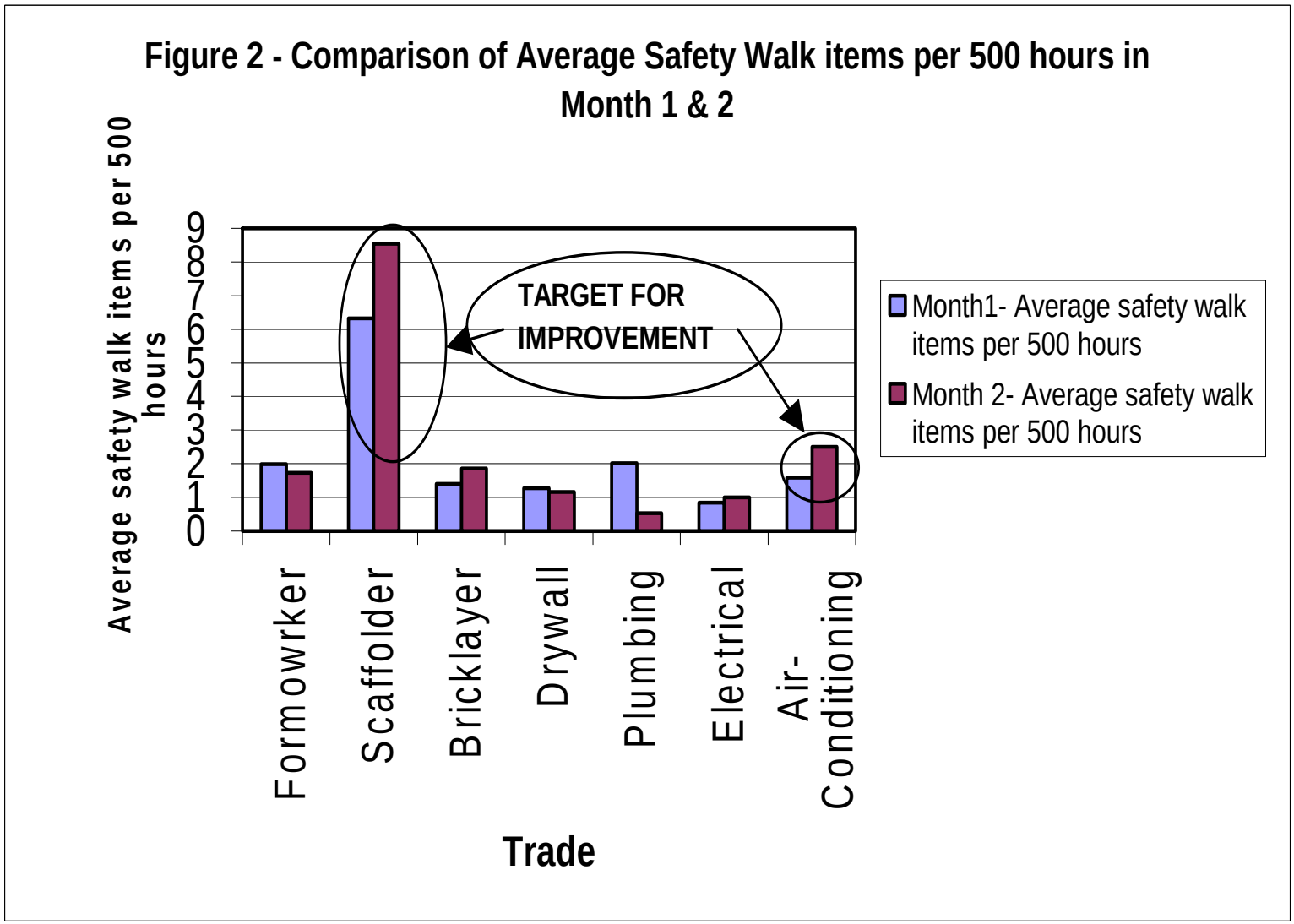
Linear process

Feedback

Input

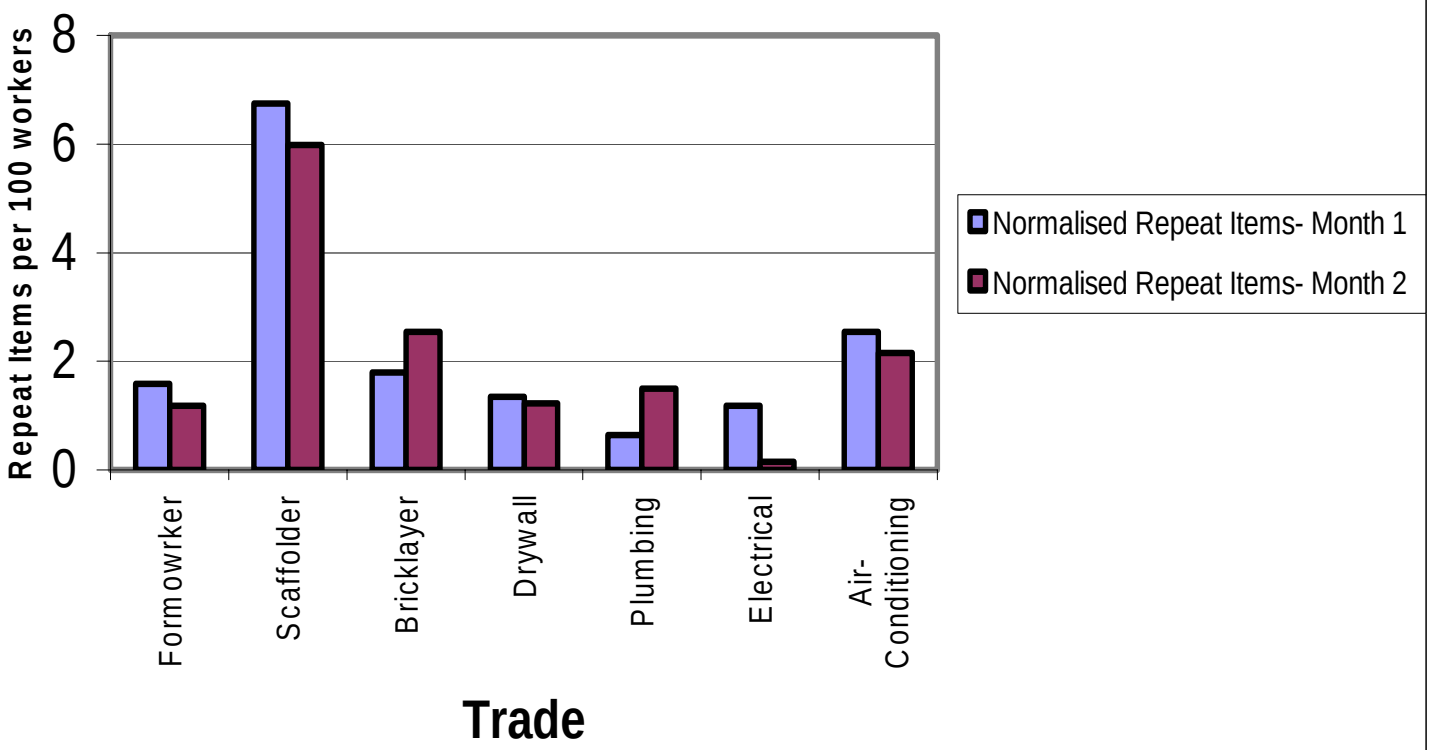
Figure 1: Iterative process for developing key performance measures

Safety hazards by trade

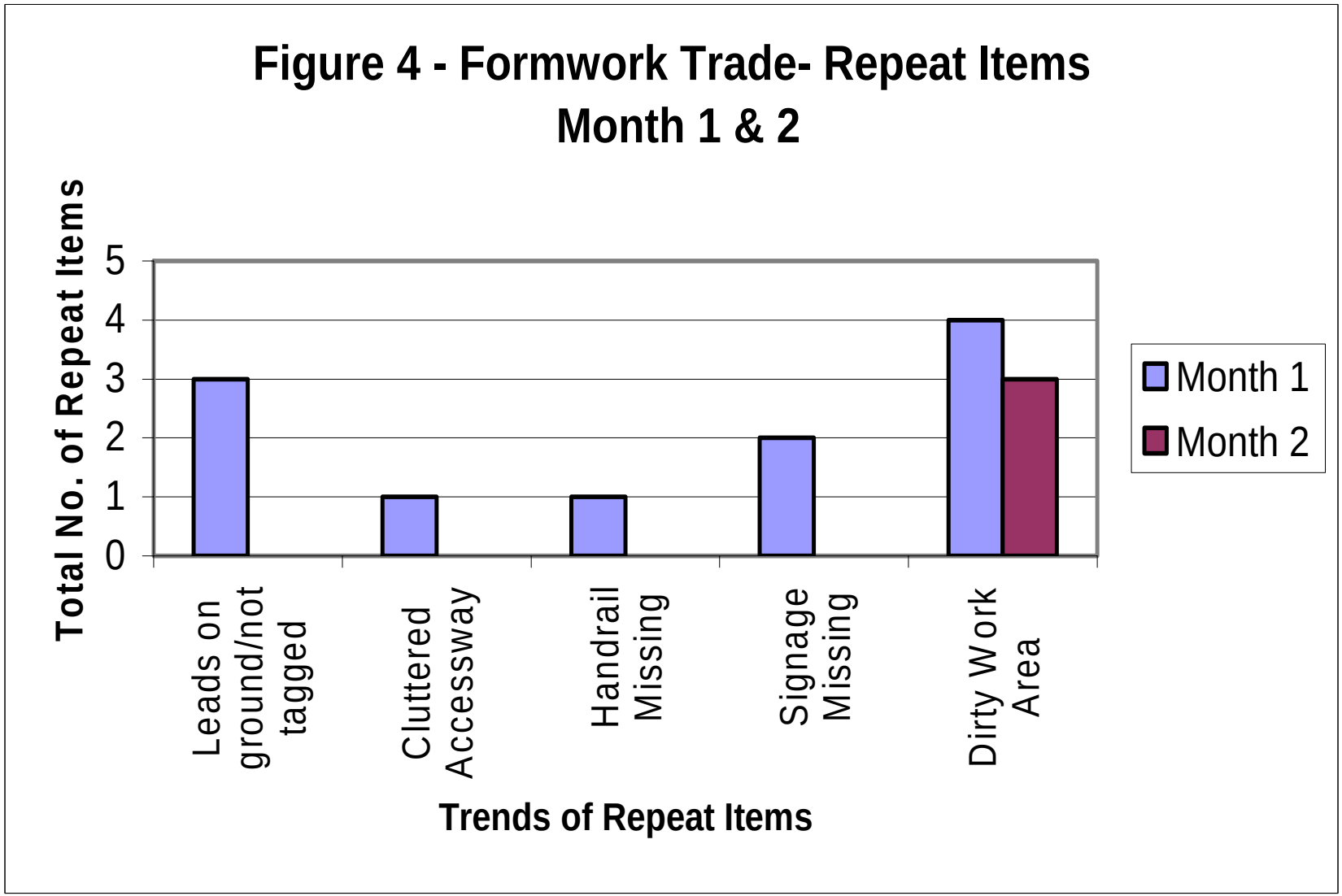


Repeat items by trade

Figure 3 - Comparison of Normalised Repeat Items per 100 workers in Month 1 & 2



Repeat items by trade



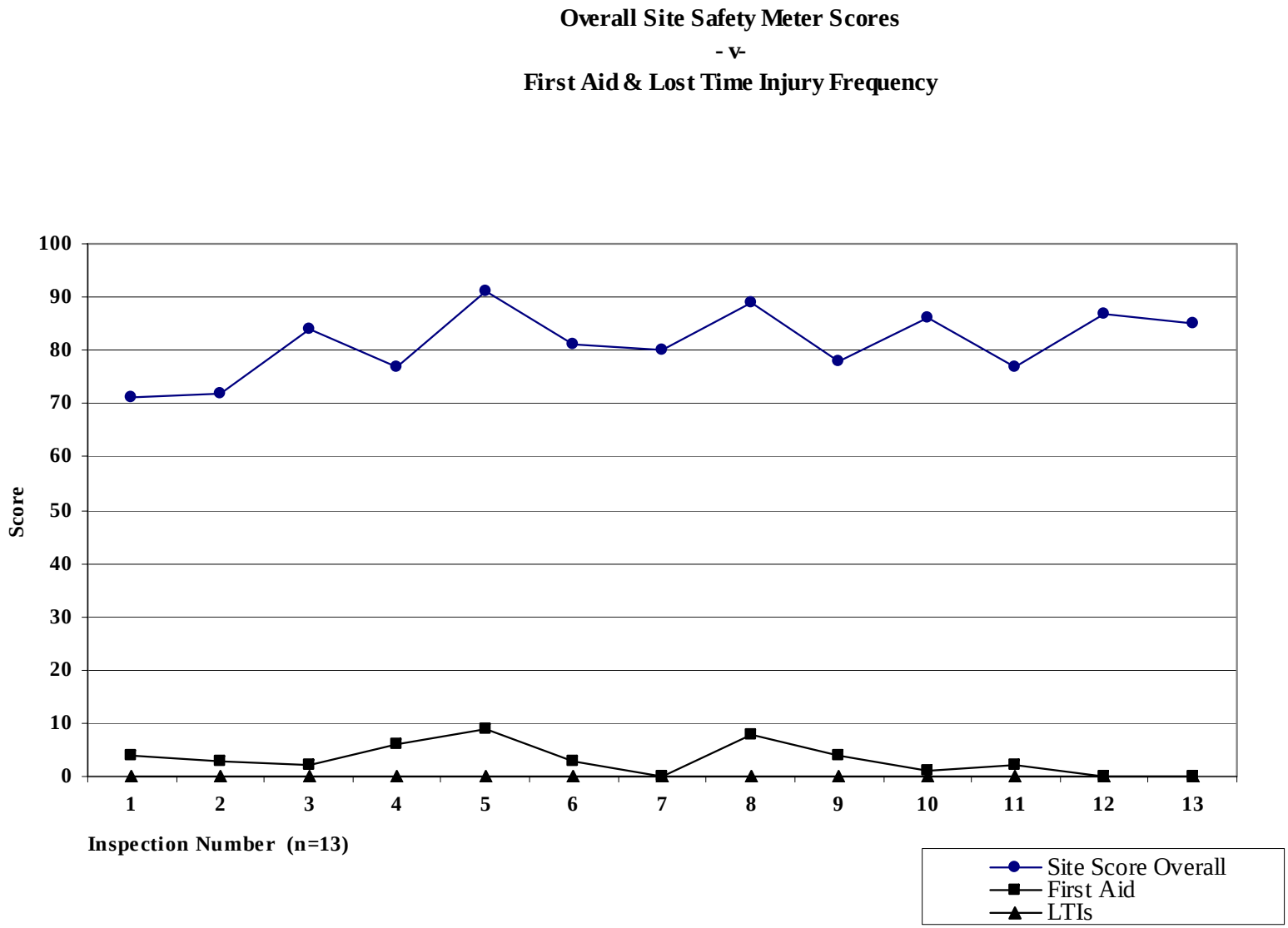
Site safety meter constructs

- Working habits –equipment and use
- Order and tidiness
- Electrical and lighting
- Scaffolding and ladders
- Protection - falls and falling objects
- Plant and equipment

SSM tally process

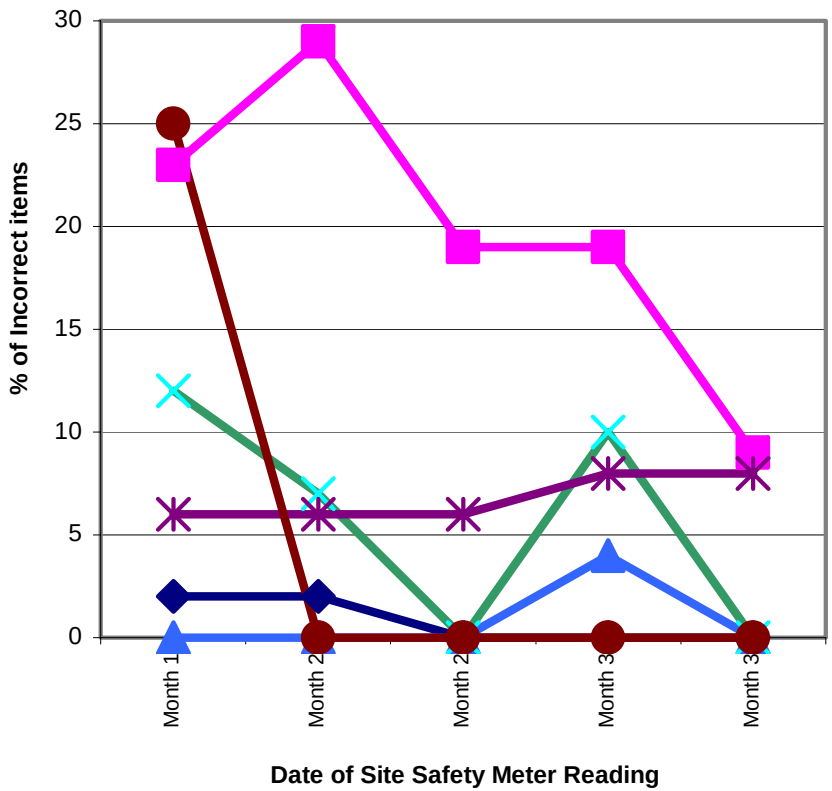
Construction Company – Example taken from a large commercial construction site.					
Site – Sydney central business district.		**Date:** 20/11/98			
Object	**Correct**	**Total**	**Not correct**	**Total**	**%**
1. Working Habits.	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 I	51	𝍸 𝍸 𝍸	15	**77**
2. Order and tidiness.	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 IIII	34	II	2	**94**
3. Electricity and Lighting.	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 III	63	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 III	33	**66**
4. Scaffold and ladders.	𝍸 𝍸 𝍸 𝍸 III	23	𝍸 𝍸 I	11	**68**
5. Protection against falls and falling objects.	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 IIII	54	𝍸 𝍸 𝍸 𝍸 𝍸	25	**68**
6. Plant and equipment.	𝍸 II	7	𝍸 I	6	**54**
	Total Correct	**232**	**Total Not correct**	**92**	

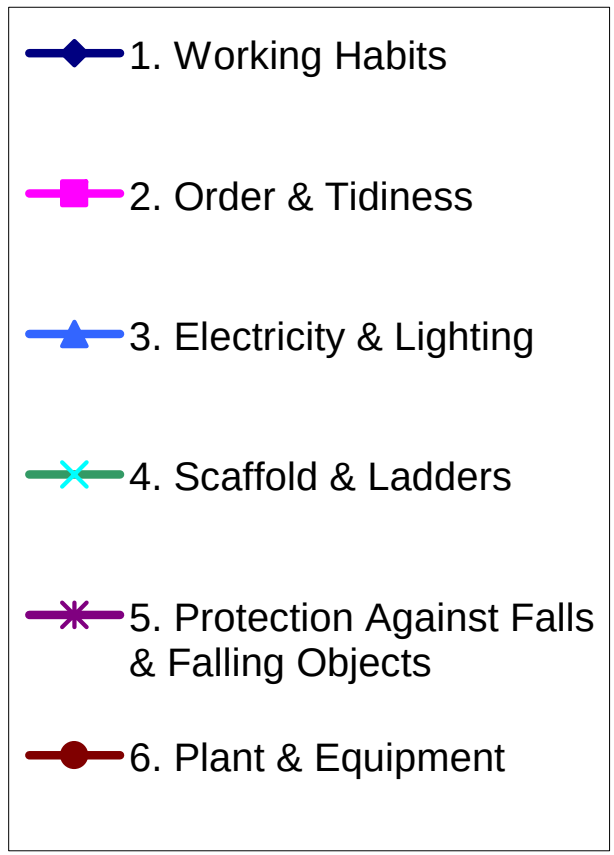
Original approach for SSM



More detailed output SSM

Figure 5 - Comparison of % incorrect safety environment items using site safety meter - Month 1,2 & 3





What did we learn ?

- As soon as you measure it – it improves
- Finding the right measures takes time
- General feedback gets you some way
  - But continuous improvement requires detail
- Need skill in negotiation and leadership
  - Resistance and suspicion at every level