

Process Related Incident Measure (PRIM)

CSCChE/ CCPA PSM Division

Manny Marta
NOVA Chemicals
October 2006
Sherbrooke, Que

What is PRIM About?

- It's about **monitoring & measuring process-related incidents** in the chemical industry in Canada.
- Incidents like this.....



Why PRIM?

- To gain insight into **trends** using basic data and to have a **discussion** on what the data/ trend is suggesting in order to make the chemical industry **aware** of areas for **improvement** in performance at their facilities.

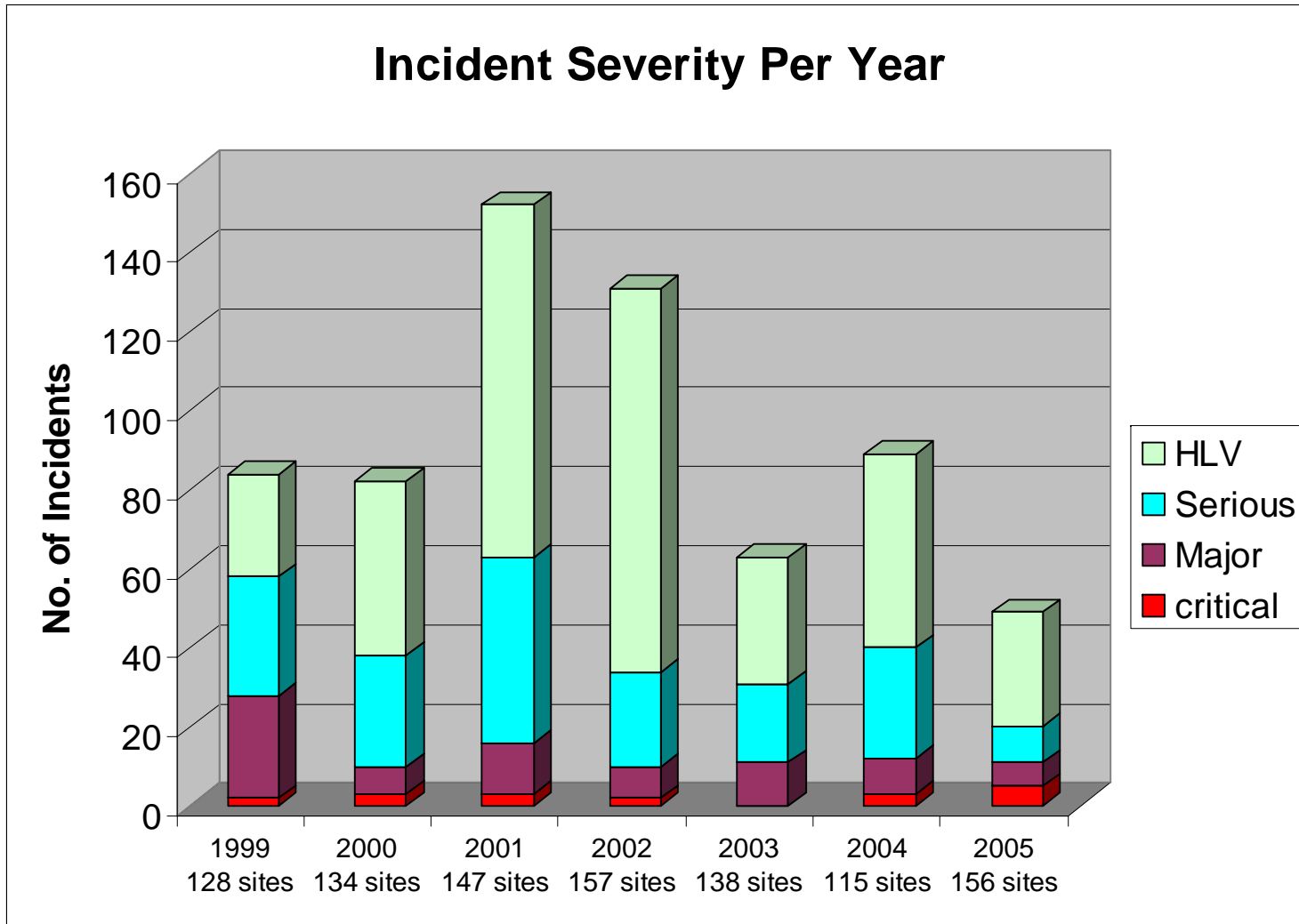
How Does PRIM Work?

- Survey issued annually at beginning of year to CCPA member companies
- Raw Data collected & compiled by CCPA
- Raw Data normalized based on number of primary and secondary causes for each incident
- PRIM Analysis Team:
 - Validate accuracy of cause selection
 - Prepare graphs
 - Prepare “80-20” contribution analysis and identify changes in trends

Examples of Intervention From PRIM Effort

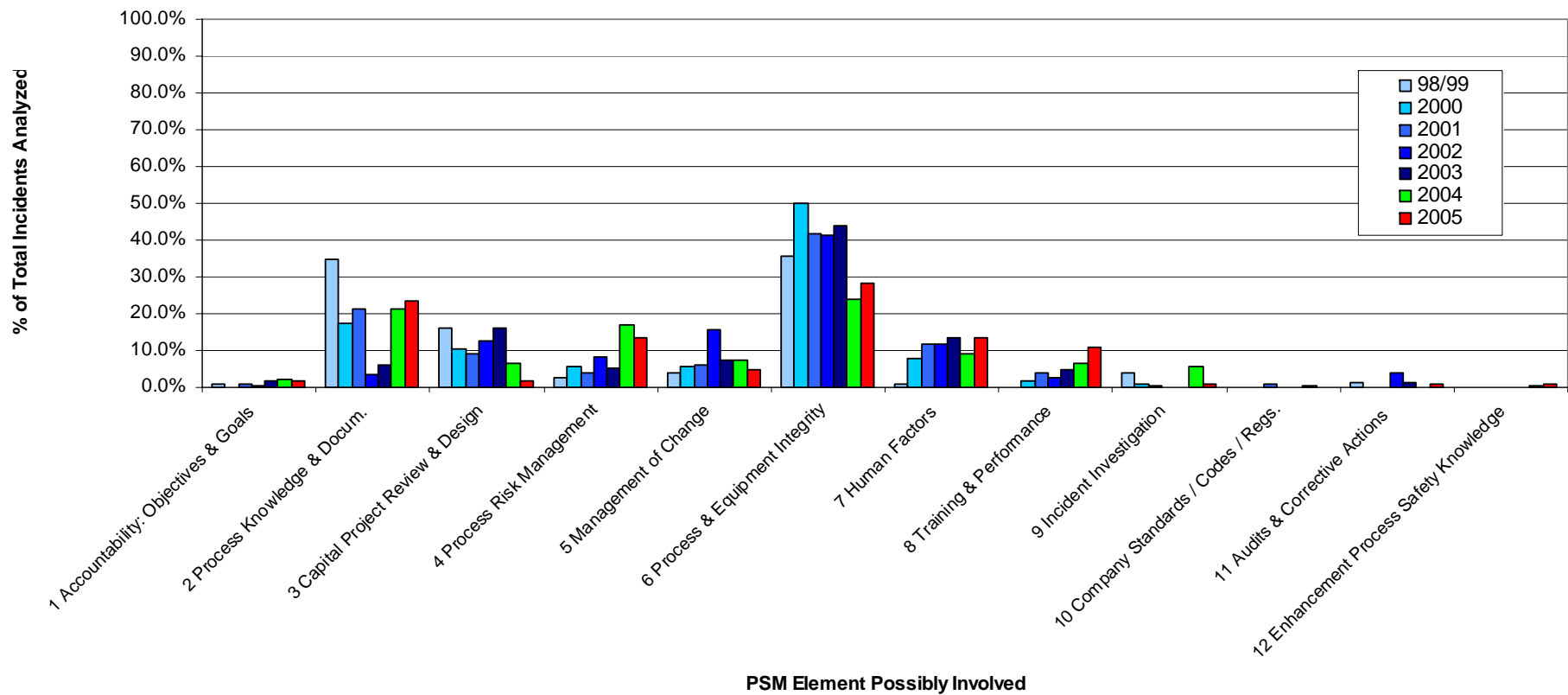
- Incident trend due to demographic changes led to development of guideline on Management of Organizational Change
- Recognition of continuing contribution from Process/ Equipment Integrity system deficiencies in general (in particular deficiencies in PM program and maintenance procedures)

PRIM Results



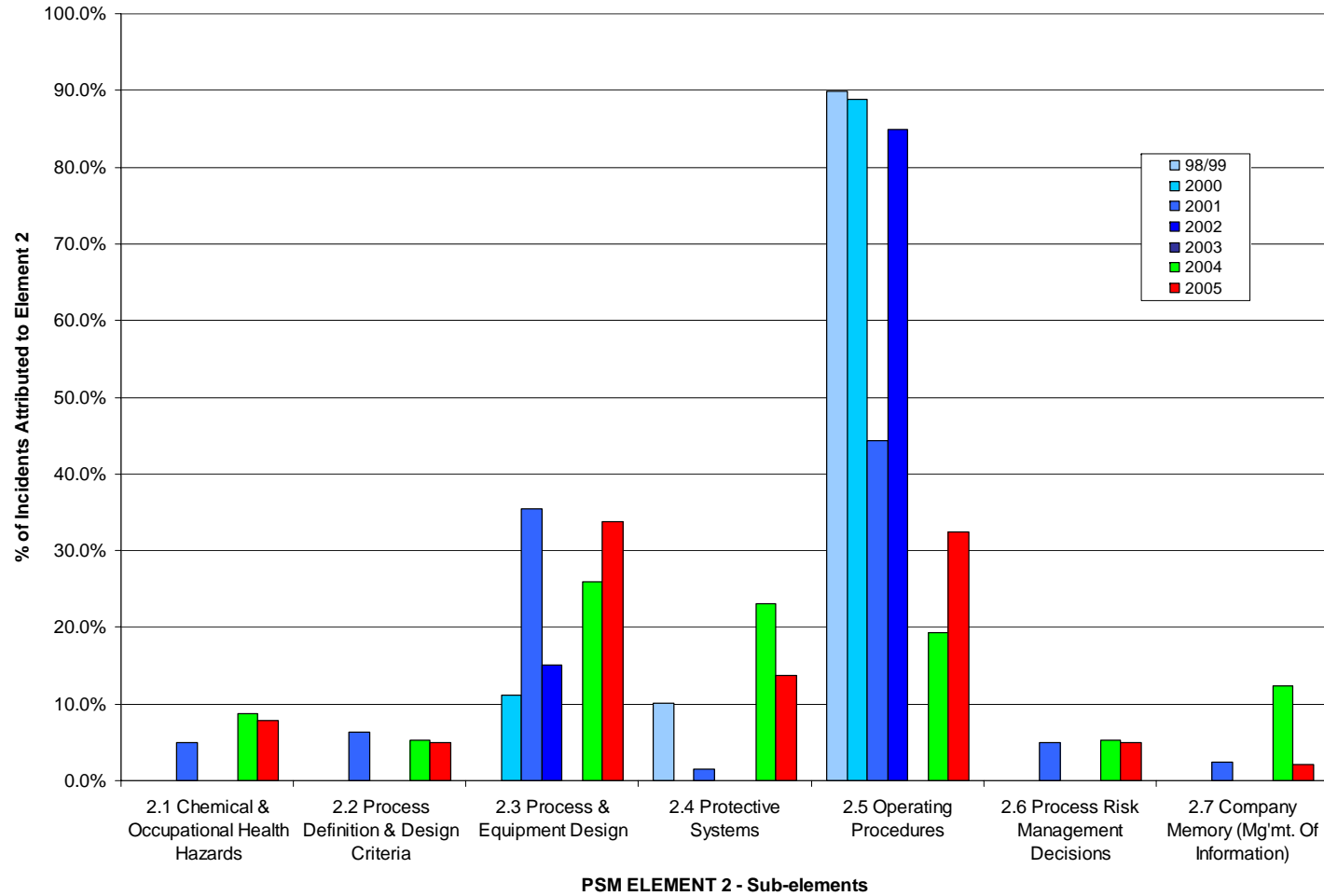
PRIM Results

PRIM INCIDENT CAUSE ANALYSIS 1998/1999 TO 2005



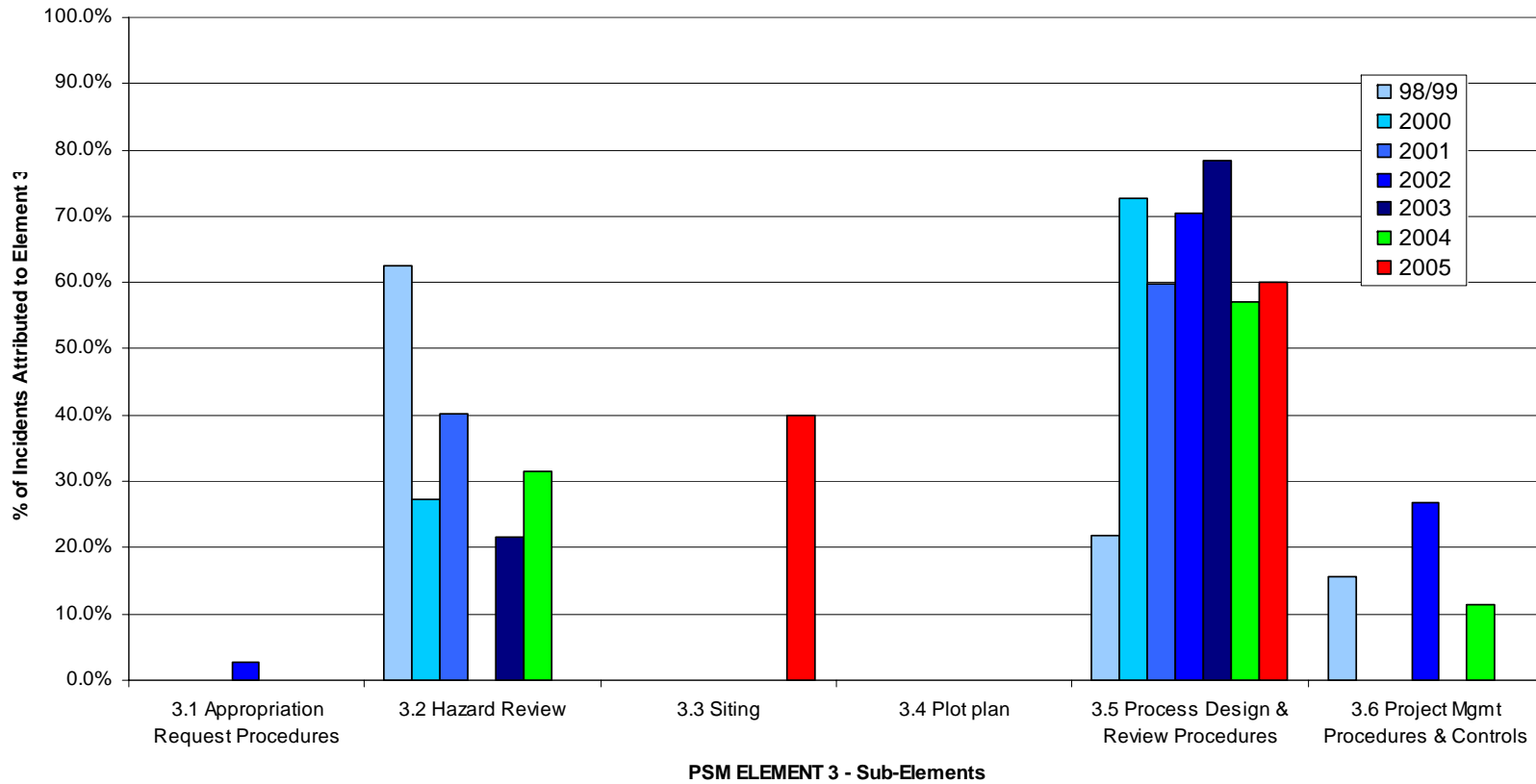
PRIM Results

PRIM 98/99 TO 2005 - Element 2 (Process Knowledge & Documentation)



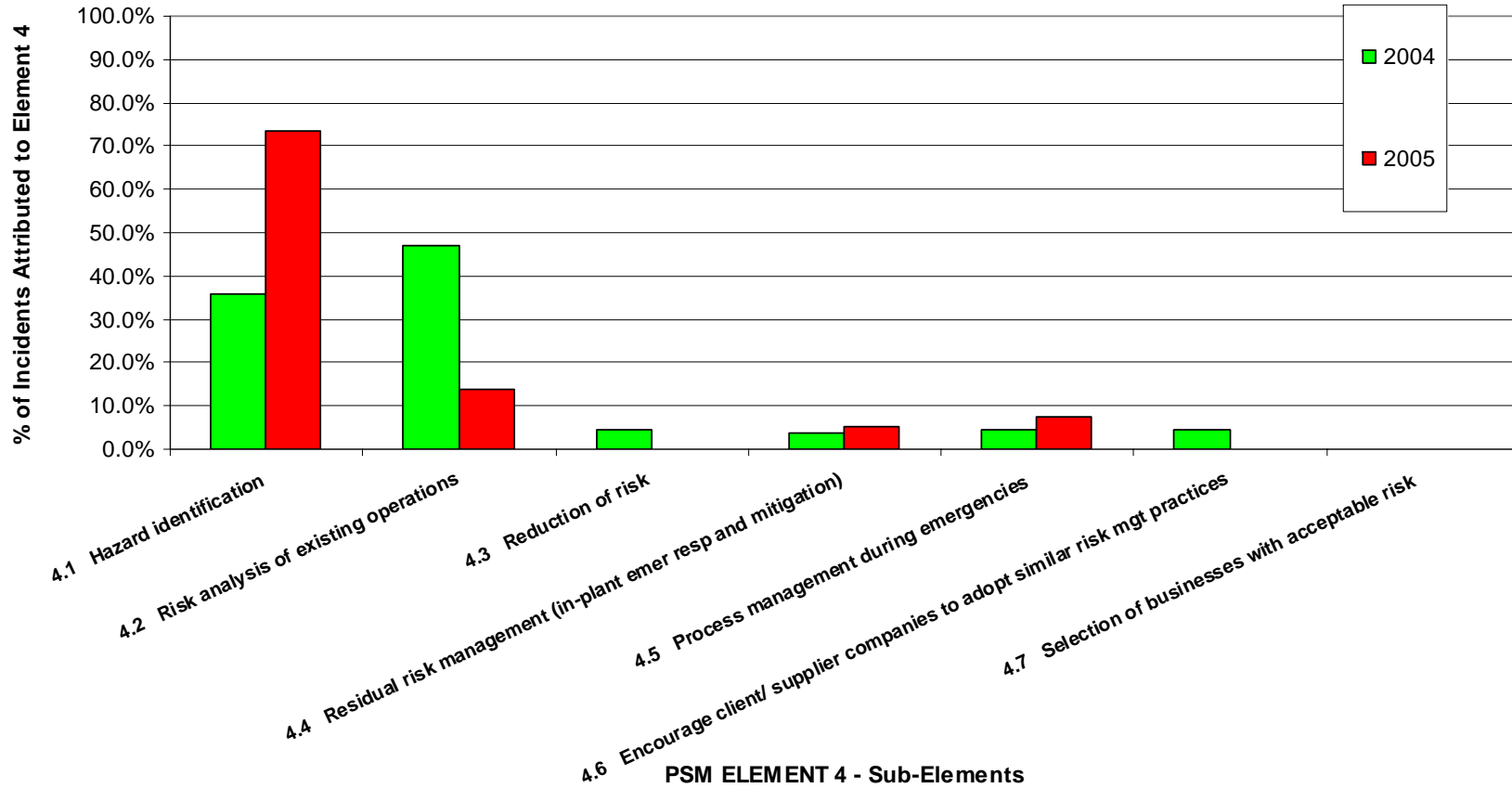
PRIM Results

PRIM 98/99 TO 2005 - Element 3 (Cap. Project Review & Design Procedures)



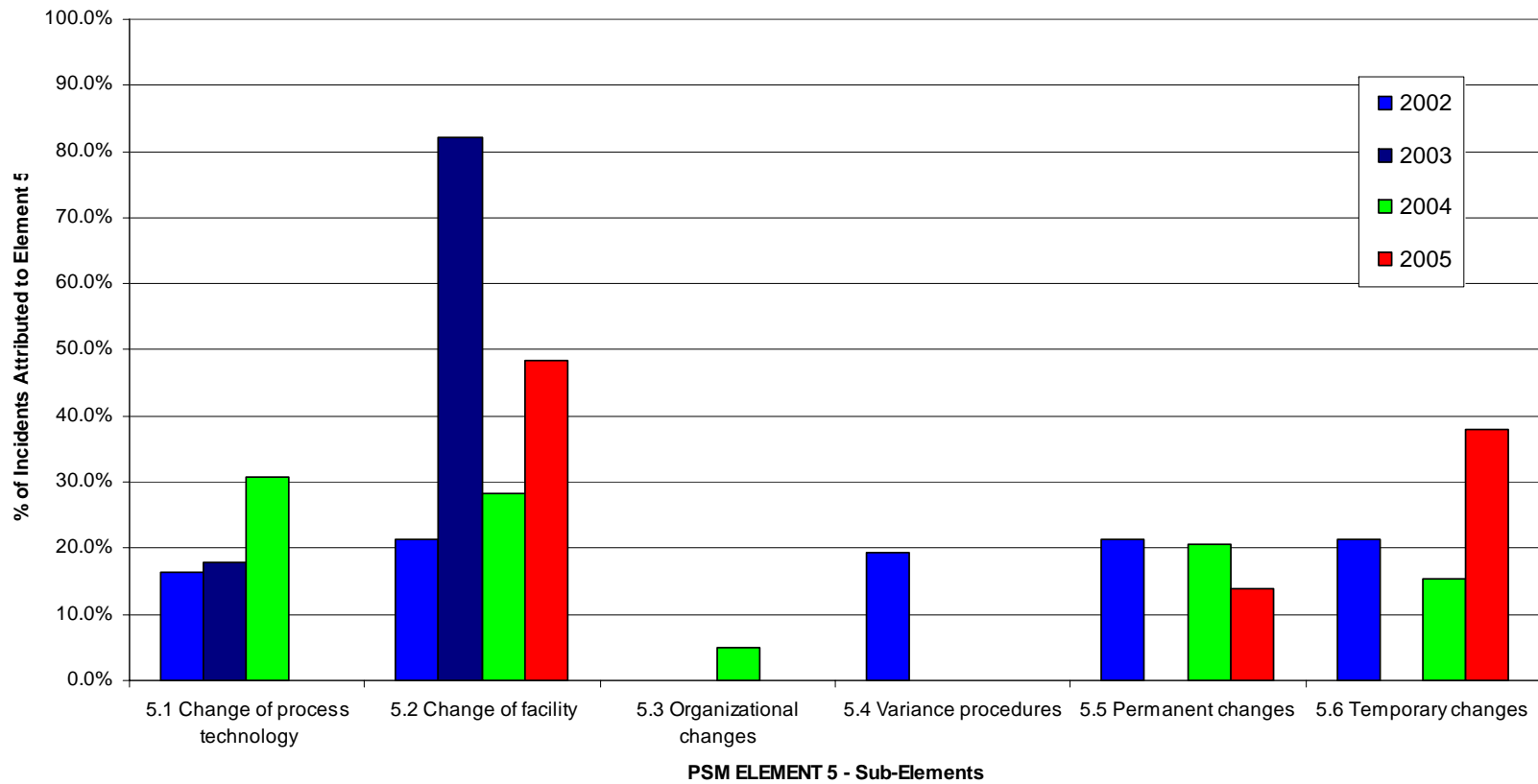
PRIM Results

PRIM SINCE 2004 - Element 4 (Managing Process Risk)



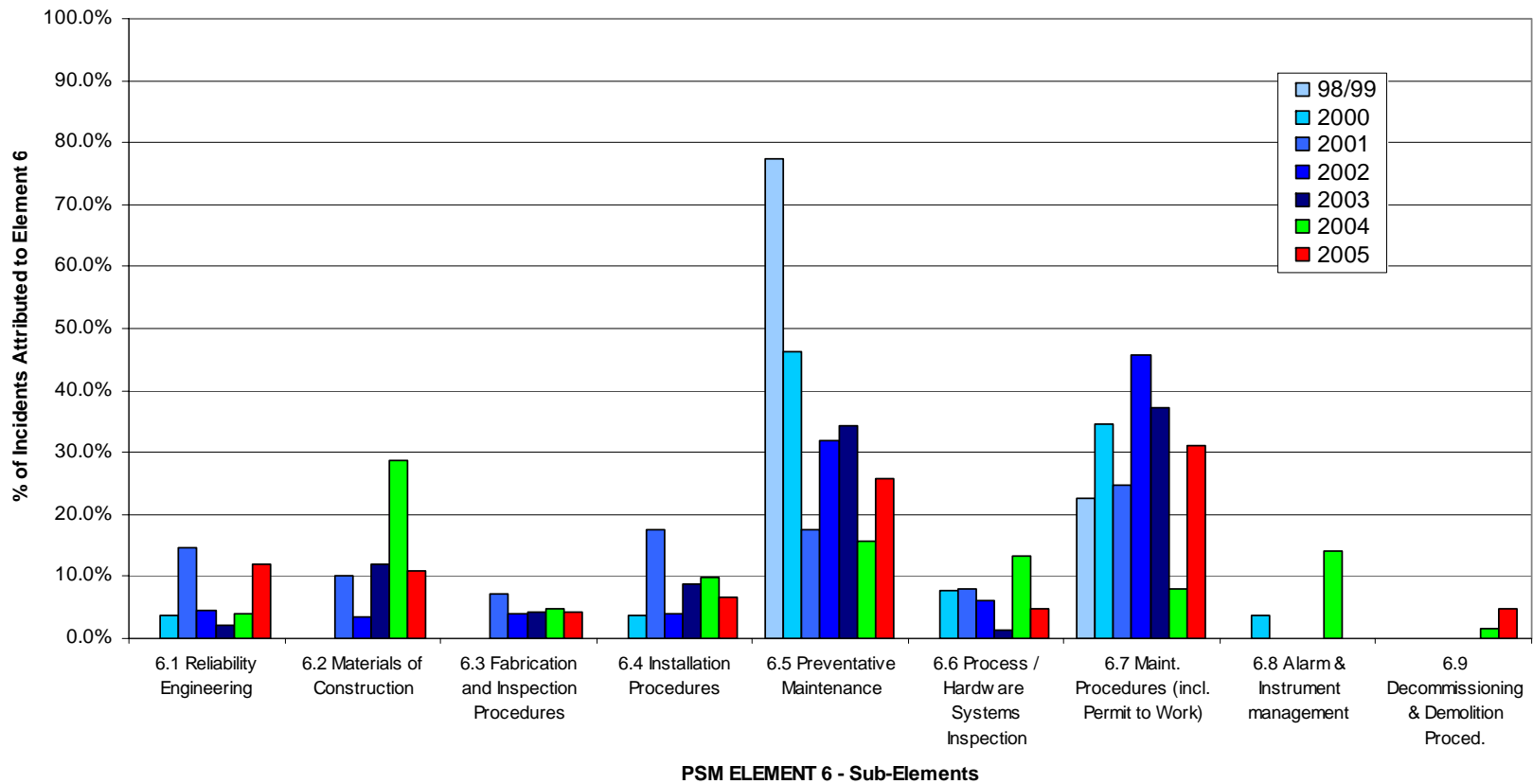
PRIM Results

PRIM 2002 TO 2005 - Element 5 (Management of Change)



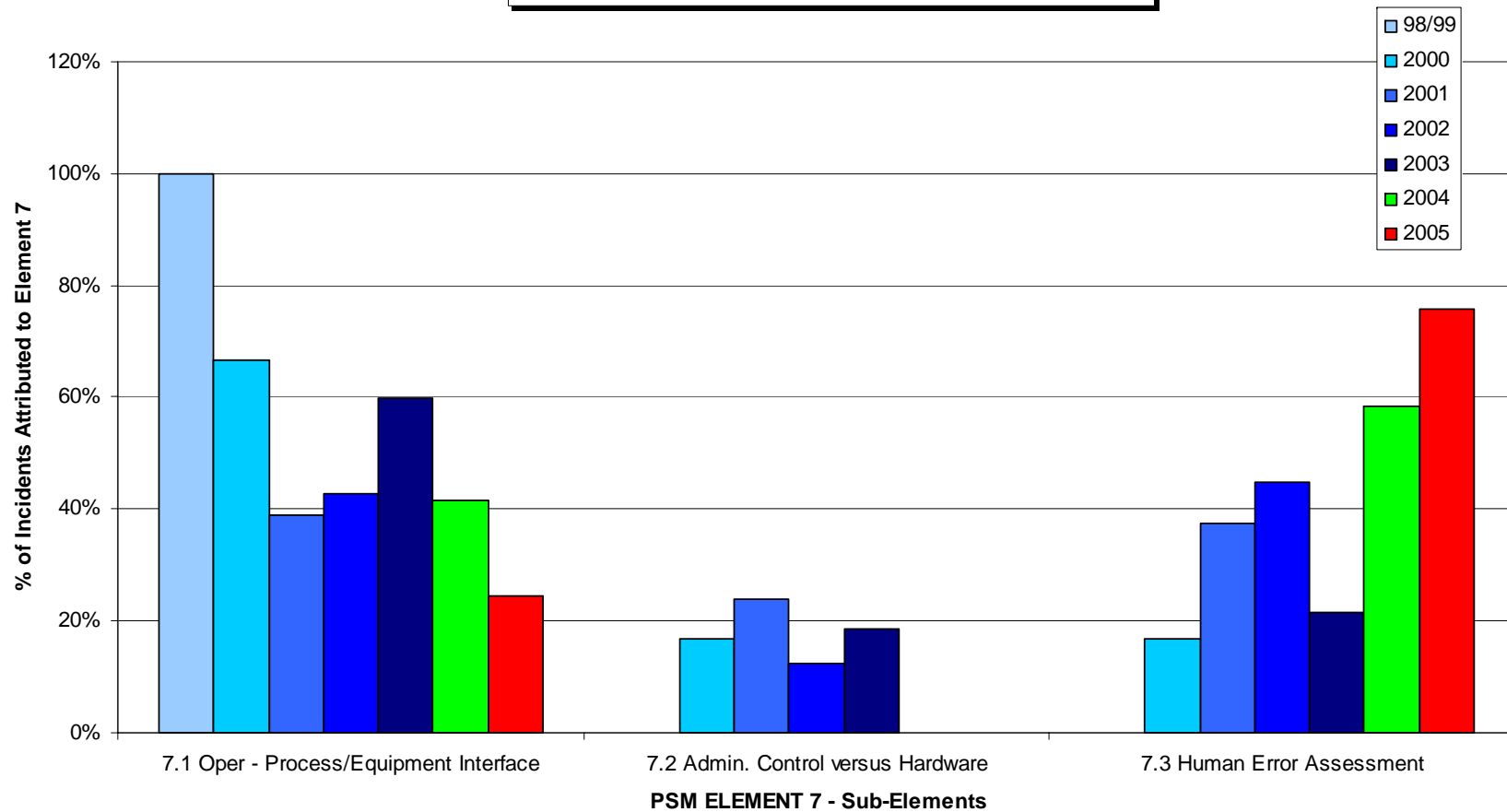
PRIM Results

PRIM 98/99 TO 2005- Element 6 (Process & Equipment Integrity)



PRIM Results

PRIM 98/99 TO 2005 - ELEMENT 7 (Human Factors)



Future Considerations

- Better explain human factors & human error in PRIM survey
- Use absolute numbers instead of % normalization
- Statistical analysis to confirm real trends
- What to do with High Learning Value incident information (omit/ define better/ how used in overall data)
- Should HLV incident posters, if developed, be posted on web?
- Start monitoring/ measuring process fires?
- Provide averages for companies to compare against?
- Expand HISAT survey on more significant components?
- Monitor more closely temporary operational change causes?