

CPS Testing

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Make today matter



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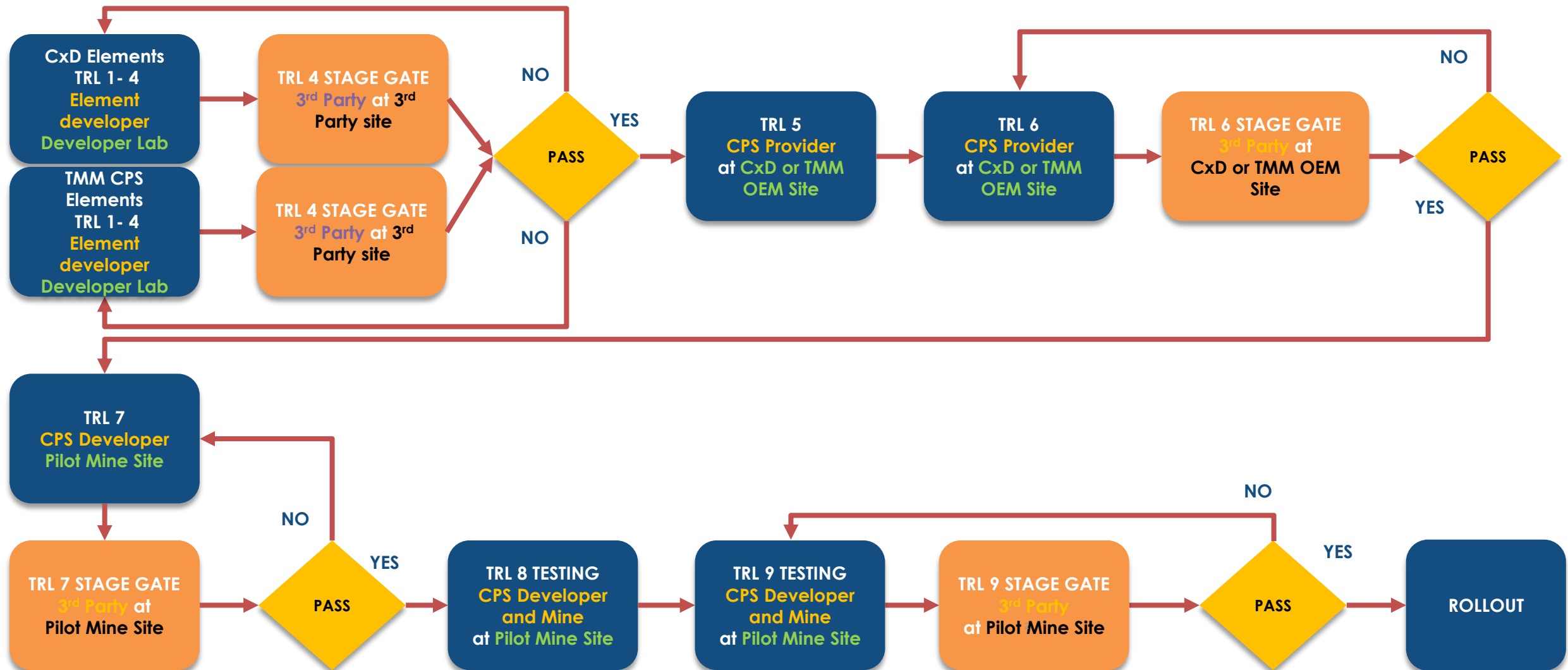
Faculty of Engineering,
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Fakulteit Ingenieurswese, Bou-omgewing en
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Tikologo ya Kago le Theknolotši ya Tshedimošo



CPS testing

CPS test regime



CPS testing readiness

TMM testing (TRL4)

| No. | TRL | Test protocol | Status | Commercially ready |
|-----|-----|---|--------|--------------------|
| 1 | 4 | TMM ISO 21815 Interface Test | | Ready |
| 2 | 4 | TMM Log keeping test | | Ready |
| 3 | 4 | TMM Machine sensing test | | Ready |
| 4 | 4 | TMM self – diagnostic test | | Ready |
| 5 | 4 | Surface TMM Machine Controller Test | | Ready |
| 6 | 4 | Underground TMM Machine Controller Test | | Ready |

CPS testing readiness

CxD testing (TRL4)

| No. | TRL | Test protocol | Status | Commercially ready |
|-----|-----|---|--------|--------------------|
| 7 | 4 | CxD ISO 21815 Interface Test | | First tests done |
| 8 | 4 | CxD Log keeping Test | | First tests done |
| 9 | 4 | Surface TMM CxD Self-diagnostic Test | | First tests done |
| 10 | 4 | Underground TMM CxD Self-diagnostic Test | | First tests done |
| 11 | 4 | Surface TMM Effective Warning Test | | End of June |
| 12 | 4 | Underground TMM Effective Warning Test | | Beginning of June |
| 13 | 4 | Surface TMM CxD Basic Detection and Tracking Test | | July/Aug |
| 14 | 4 | Underground TMM CxD Basic Detection and Tracking Test | | Beginning of June |
| 15 | 4 | Surface TMM CxD Scenario Test | | July/Aug |
| 16 | 4 | Underground TMM CxD Scenario Test | | Beginning of June |

CPS testing readiness

CPS testing (TRL7 and higher)

| No. | TRL | Test protocol | Status | Commercially ready |
|-----|-----|--------------------------------------|----------|--------------------|
| 18 | 6 | Surface TMM CPS Integration Test | Ready | Ready |
| 19 | 6 | Underground TMM CPS Integration Test | Ready | Ready |
| 17 | 4 | Underground CxD Robustness Test | Starting | Beginning June |
| 20 | 7 | Surface TMM Advanced CxD Test | Starting | First test 6 June |

CPS testing schedule

Current schedule

- Lots of requests, mainly from CxD suppliers
 - Focus mainly on ISO21815-2 testing, log keeping and self-diagnostics
- Some queries from interface suppliers
 - Focus on ISO21815-2, log keeping
 - Machine control and machine sensing also relevant
- Several test requests not following MOSH published test specification
 - Permissible, but
 - Requires risk assessment first
 - We retain the right to refuse testing if we consider it to be inadequate/dangerous
 - Disclaimer will accompany such a test
- Current bookings for end of June/beginning of July – balancing a tight schedule

CPS testing discussion

