Chevron Project Proposal Discussion+

19th January 2015 at 10:00, Strategis Board Room, CSIR Building 14F

Present: Angus Steele (AS), Dawid Oosthuizen (DO), Danny Naicker (DN), Hein Swart (HS), Peter Bosscha (PB), John Dickens (JD), Thegaran Naidoo (TN).

**Apologies:** Riaan Coetzee (RC)

Absent without leave: None

| **AGENDA**  **ITEM** | **DISCUSSION** | **ACTION** | **WHO & BY WHEN** |
| --- | --- | --- | --- |
| 1. Welcome | Welcome all Individuals |  |  |
| 1. Project Overview | * Different possibilities of the RFP   + Immediate purchase   + Funded development of near term solutions   + Funded development of long term solutions * Timeline   + <6 Months   + 6 - 12 Months   + 12 - 24 Months   + Proposal due 12th February |  |  |
| 1. Criteria | * Size   + 12” diameter opening * Operating environment   + Be safe to operate in highly volatile areas. IECEX Class 1 Division 1 or ATEX Zone 0.   + Metallic (interference) * Inspection   + Wide and narrow view   + 10mm, 0.5mm @ 5m   + Un-lit areas * Remote navigation   + No User or   + No line of sight * Crash resistant   + Bounce off without damage to surface or device and no loss of control. |  |  |
| 1. Phases | 24 Month Time Frame   1. Proof of technical concept 2. Development and optimization against the intended application 3. Prototype construction and laboratory testing 4. Field demonstration 5. Dangerous location certification 6. Inspection services definition, test protocols, inspection procedures, and preparations for commercial deployment. 7. Inspection services commercial deployment. |  |  |
| 1. Technical Design | * Mechanical Design   + Conform to Criteria.   + Realistic weight limits * Aeromechanics   + Thrust/Mechanical power requirements.   + Motor/Lift   + Direction control * Electrics   + Power source   + Processing   + Motor Drives   + Remote Control   + Sensors   + Cameras * Intrinsic Safety   + Electrical power requirements and limits.   + Fault protection.   + Barrier Designs   + Certification | Non-Metallic drive system.  No light metals, titanium, aluminum.  Thin rubber cushioning?  Pneumatic power.  Air used for thrust.  Single motor, quad rotor.  Laser drive system?  Ducted fan?  Power over fibre. |  |
| 1. Written Proposal | * High level description of proposed technology   + Robot size, shape and capabilities   + Operational safety description for highly volatile areas. * Estimated Production pathway   + Timing   + Budget   + Capacity for manufacture * Estimated Cost Per Unit   + If available * Intellectual property expectations * Desired relationship with sponsor * Team description and experience | Stellenbosch proof of concept. |  |