



NATIONAL SCIENCE AND TECHNOLOGY FORUM (NSTF) Minutes of proSET General Meeting

Date: 19 September 2025

Time: 09:00–10:35

Online via NSTF Zoom Platform

1. Welcome, apologies, and purpose of the General Meeting – Mr Johan Maartens, proSET Co-Chairperson (Engineers)

Mr Maartens (proSET Co-Chairperson) opened the meeting and welcomed everyone. Attendees at the General Meeting are listed in Appendix 1 and apologies in Appendix 2.

2. Announce changes to the proSET Committee

3. Members introduce themselves: the proSET Committee and Co-Chair

Mr Maartens expressed his gratitude to the proSET Committee members for their contributions and invited each member to introduce themselves.

4. Approval of and matters arising from the minutes of the 2024 General Meeting

The minutes from the previous AGM were reviewed and recommended for acceptance by the proSET Committee as a fair reflection of the meeting. Attendees were given the opportunity to provide feedback, with specific corrections noted, including the omission of names such as Kevin, Jansie, and Dr Christiaan Oosthuizen from the proSET Committee list, these will be added. Tony Parry (Institute of Information Technology Professionals South Africa (IITPSA)) proposed the acceptance of the minutes, seconded by Stephanie Enslin (South African Geophysical Association (SAGA)).

Under matters arising, Jansie confirmed that all funds had been moved from the shares portfolio to a fixed account, as previously suggested.

5. proSET Financial Matters

The meeting then proceeded to financial matters. Ms Niehaus presented the financial report for the past year, noting that as of 31 August, the proSET fund balance stood at approximately R2.7 million. This amount is reflected in the

NHDA Financial Management Report, which is available upon request. The funds are held across several accounts: an investment call account containing R64,000 (mainly residual transaction funds), and a primary fixed deposit investment totalling R2.669 million. Most of the funds are held in a 12-month fixed deposit account at Standard Bank.

In March, following proSET Committee instruction, all remaining shares in the investment portfolio were sold via Investec, raising R1.4 million. These funds, along with an existing R1.25 million, were consolidated and invested at an interest rate of 8.07% per annum. The monthly interest earned is sufficient to cover proSET's modest operational expenses. A nominal balance is also maintained to keep the STEMulator.org account open.

The fund originated from contributions made by the former Associated Science and Technology Societies (AS&TS) and was transferred to the custodianship of the NSTF. The funds are ring-fenced for proSET purposes and have been used prudently over time to support projects and members. Originally valued at R3.5 million, the fund has been partially spent on sector activities and now operates with limited resources, relying on interest for sustainability.

Discussion followed regarding the long-term viability of relying solely on interest income, noting that inflation may erode capital over time. While the STEMulator project remains proSET's primary initiative and can attract external funding, any future expansion will require deliberate fundraising aligned with clearly defined goals. The matter of identifying alternative income streams was noted as a priority for the incoming proSET Committee. Mr Maartens asked for recommendations for approval.

Richard (STEMulator.org) raised a point, acknowledging the committee's responsibility to explore future funding strategies but also taking the opportunity to remind attendees of the fund's historical origins. He explained that the proSET fund was built through small, regular contributions made by a wide base of members from the various Associated Science and Technology Societies (AS&TS) prior to 1994. Since then, a period of dormancy and minimal activity has led to reliance on existing capital. Richard urged members to reflect on how they might begin contributing again, warning that without additional support, the fund will continue to deplete. He encouraged a return to the collective funding model to support future projects and ensure sustainability. Mr Maartens agreed that this was a key matter for the incoming proSET Committee to address, particularly if the sector wished to expand its activities beyond the STEMulator.org project. No further comments were received from the floor. The financial report was then formally approved, with Tiffany offering the approval and confirming no additional input.

6. Terms of Reference (ToR) of proSET Committee

Ms Niehaus noted that from time to time, questions arise about the rules governing proSET and how decisions are made. While the committee has been functioning as a subcommittee of the NSTF Executive Committee (Exco), there is no formal reference to proSET in the NSTF's Memorandum of Incorporation. To address this gap, Jansie has initiated the drafting of Terms of Reference (ToR), which will be refined and formalised by the committee.

The draft outlines that proSET is a membership sector of the NSTF, represented on the NSTF Exco by two main and two alternate representatives. The proSET Committee, as a representative body of its membership, makes decisions and recommendations on several matters, including the recruitment of new member organisations, oversight of the proSET Fund, coordination of sector projects (e.g., the STEMulator.org project and the proSET Members' booklet), and planning for one of the annual NSTF discussion forums. The committee is also responsible for recommending forum themes and speakers. Ms Niehaus emphasised the importance of greater involvement from proSET members in these activities, particularly in shaping the annual forum, which draws high levels of attendance (with over 100 live participants and more than 400 registrations in the most recent event).

Regarding committee composition, it traditionally included scientists and engineers, but in recent years has expanded to include representatives from the technology sector and STEM education, reflecting the evolving mission and diversity of the proSET membership. The IITPSA currently represents IT professionals on the committee, and Jansie invited members to suggest other relevant organisations that could enhance sector representation. She further acknowledged the longstanding contributions of Tony Parry and welcomed new representatives from the IITPSA.

The draft ToR will also include formal procedural elements, such as the number of meetings per year and quorum requirements, currently observed informally as a minimum of 50% attendance. The finalisation of these terms aims to provide clearer operational guidance and accountability moving forward.

7. proSET Membership

Mr Maartens proceeded to provide an update on proSET membership. It was noted that proSET membership is open to professional science, engineering, technology, and STEM education-related associations and societies that are members of the NSTF. These organisations represent professionals and experts within their respective fields and collectively form the proSET sector of the NSTF. Membership is therefore institutional, not individual, and aims to ensure representation from a broad base of scientific, engineering, technological, and educational disciplines. Since the last General Meeting, several new member organisations have joined proSET, including the **Environmental Assessment Practitioners Association of South Africa (EAPASA)**, the **International Council on Systems Engineering (INCOSE)**, the **South African National Institute of Rock Engineering (SANIRE)**, the **South African Statistical Association (SASA)**, and the **Society for Asphalt Technology (SAT)**. Mr Maartens expressed appreciation for these organisations becoming part of the proSET community and welcomed them on behalf of the committee. These new additions further diversify the proSET membership and strengthen its representation across key sectors.

8. proSET Discussion Forum: Fourth Industrial Revolution (4IR) – 27-28 August 2025

Ms Niehaus reported that the 2025 proSET discussion forum, was held over two days on 27–28 August and it was as highly successful and well attended. The forum focused on the overarching NSTF theme for 2024: the Fourth Industrial Revolution (4IR), with particular emphasis on Artificial Intelligence (AI) and Cybersecurity, as requested by the proSET Committee.

A diverse lineup of expert speakers presented on these key areas, exploring their applications and implications across various sectors, including health and medicine, mining and surveying, water management, and more. Notably, cybersecurity was highlighted as a growing area of concern due to its potential for disruption if not adequately addressed, especially in light of its increasing relevance in global conflicts and critical infrastructure. A media release summarising the forum's key insights has already been issued and distributed, and all video recordings of the presentations are available on the NSTF website. Members were strongly encouraged to view the recordings, which offer in-depth knowledge akin to attending a short course. Importantly, the forum also qualifies for Continuing Professional Development (CPD) points: through partnerships with organisations such as the Engineering Council of South Africa (ECSA), the IITPSA, and SACNASP, CPD points are awarded to engineers, IT professionals, and registered scientists who attend. This initiative reinforces the forum's value not only for professional enrichment but also for formal development within regulated professions.

9.1 STEMulator project

Richard opened with a reflection on the STEMulator project's current status, highlighting that a previously received funding injection has been mostly depleted. Modest ongoing support from proSET allows for essential maintenance and limited content updates. He notified the members that a detailed report was prepared and made available on the project's website.

Richard shifted focus to strategic engagement and visibility, presenting the "STEMulator.org" interface to the attendees. Notable achievements include the release of dedicated mobile apps on Android and Apple platforms, making it easier for users, particularly students to access content. He encouraged members to promote the app and make use of the website's visitor form, which helps track referral sources and identify ambassadors who are actively promoting the project.

He highlighted a collaboration with the Corrosion Institute as a model for how associations can contribute content, including educational material relevant to their field, such as a new "reservoir" section that integrates real-world infrastructure like pipelines. Members were encouraged to create similar educational tie-ins. Richard compared the STEMulator.org to Wikipedia in its open contribution model and stressed that it is a platform for others to promote their own STEM-related courses, encouraging content submissions from any NSTF member, not just proSET-affiliated ones.

However, a core challenge remains reaching learners directly. Although the team has engaged parents, teachers, and subject advisors, including presentations to the Department of Basic Education (DBE), they have not seen meaningful follow-through in schools.

Suggestions from attendees, such as presenting at GDE and IEB teacher conferences, were welcomed. Richard emphasised the need for direct marketing and potentially professional outreach to increase visibility. Stephanie (SAGA) reinforced the need for reaching teachers via structured conferences, as STEM subjects like geology often fall outside school curricula. Richard acknowledged past outreach efforts to subject advisors and life sciences teachers but noted the difficulty in tracking whether these interactions translate into actual school engagement.

The written progress report, presented by Ms Niehaus, noted an additional R94,000 allocated from proSET, a R20,000 donation from the Zenex Foundation, and R15,000 from the South African Society of Crop Production. While a funding proposal to the Trevor Noah Foundation was unsuccessful, it laid the groundwork for future submissions. Marketing efforts, despite limited funds, were robust—featuring the STEMulator in science centres such as Cape Town Science Centre and Sci-Bono Discovery Centre, where permanent monitors now display the platform to thousands of visitors.

Twelve youth outreach activities have taken place between May and September, reaching thousands of learners. Partnerships have been expanded, notably with Investfood, IT and HSRC, which allocated interns to develop a gamification feature and analytics tool for the platform. These enhancements aim to personalise user engagement and identify learner interests through interaction data, much like Duolingo's streak and scoring system.

The current intern, though originally from a communications background, has effectively contributed to STEM-related career guidance by helping learners understand subject requirements and career paths via the STEMulator.org. Her impact highlights the tool's value as a digital career guidance platform. The session concluded with a recognition of progress, but a clear call for broader content contribution, deeper engagement with schools, and strategic marketing to achieve the STEMulator's core mission: inspiring and guiding the next generation of STEM professionals.

9.2 proSET Member Booklet

Ms Niehaus reported that the "Who's Who in the Zoo" booklet, is a long-standing initiative that was driven by Dawie. It serves as an essential networking and informational resource within the science, engineering, and technology sector in South Africa (SA). Dawie strongly believed that professionals and organisations must know each other, understanding who does what, so that meaningful connections can be made across the sector. The booklet, which includes profiles of all current and past proSET members, has recently been updated to incorporate the five newest members, who are now officially part of this valuable resource. Everyone is encouraged to review their entries in the booklet for accuracy and submit updates if needed, as it's easily maintained electronically and hosted permanently on the website. Beyond being a member directory, Dawie envisioned it as a high-level map of SA's scientific and technical landscape, a reflection of the country's often underappreciated wealth of skills and expertise. The booklet stands as both a networking tool and a celebration of the sector's collective knowledge and capacity.

10. Suggestions for proSET Discussion Forum in 2026

Members were invited to propose topics for the 2026 proSET discussion forum, with a particular focus on identifying pressing issues within their organisations and professional sectors. One key suggestion that emerged centred on the integration and responsible use of artificial intelligence (AI) tools across various domains, particularly in education and research from Mr Maartens. Participants highlighted the relevance of exploring how AI can be leveraged, ranging from classroom use, programming, and research support to everyday productivity while also addressing its legal, ethical, and practical implications. It was suggested that the discussion be framed positively, emphasising "tips and tricks" for using AI effectively to draw greater interest and engagement. The consensus was that the conversation should move beyond the question of whether AI is allowed, to how it can be best managed and responsibly applied in real-world contexts. The forum could therefore serve as a platform to share insights, foster dialogue, and promote best practices around AI in the professional and educational spheres. Additional suggestions were welcomed, with the discussion remaining open for further input.

Following an appreciation to participants who began sharing their names and affiliations in the chat, the Mr Maartens invited further suggestions for the 2026 proSET discussion forum. Several key themes were proposed. One notable

suggestion from Prof Nephawe (South African Council for Natural Scientific Professions (SACNASP)) was a focus on software tools developed by researchers, particularly those created to support research activities. It was noted that while this area is often under-discussed, there is significant innovation happening at the level of custom-built research software, warranting recognition and further exploration.

Participants also reflected on the broader use of AI tools, especially in the context of education, software development, and professional productivity. There was agreement that the discussion should go beyond regulatory concerns and instead focus on practical applications, ethical boundaries, and user empowerment.

Another proposal from Prof Nyamupangedengu (Southern African Association for Research of Maths, Science and Technology & Education (SAARMSTE)) suggested focusing on AI's role in STEM education, especially at school level, continuing the tradition of exploring school-level STEM topics every second year. Expanding this, it was proposed that the forum could tackle how STEM interfaces with policy, practice, and decision-making, a gap that has been raised in high-level engagements, including by the Minister. Concerns about the decline in R&D funding were raised, with emphasis on the need for the STEM community to better articulate its relevance to national development, policy, and governance.

It was agreed that all these suggestions would be captured in the meeting transcript, with a follow-up communication to members to help refine and finalise the forum topic for 2026.

11. NSTF Projects

The meeting then transitioned to an NSTF project update, led by Jansie.

11.1 NSTF's 30-year anniversary as an organisation and 2024/2025 NSTF-South32 Awards: 31 July 2025; proSET's role in the Awards; Ukhozi Award to Dawie Botha

Jansie reported that the NSTF marked its 30th anniversary this year, celebrating this milestone notably at the NSF South32 Awards held on 31 July. A special award, the Ukhozi Award (meaning "eagle" in isiZulu), was presented to Dawie Botha in recognition of his significant contributions to both the NSTF, especially through proSET and the STEMulator initiative, and to SA through his leadership in civil engineering. The anniversary celebrations also included a commemorative video highlighting achievements over the past 30 years and a newly updated history document detailing the formation and journey of proSET.

11.2 NSTF Discussion Forums

Jansie shared updates as follows:

The NSTF held a Public Relationship with Science Conference in collaboration with the Department of Science, Technology and Innovation (DSTI) on 26–27 March. This was informed by the 2022 Human Sciences Research Council (HSRC) survey on public perceptions of science, which revealed surprisingly positive attitudes among South Africans toward science, scientists, and scientific knowledge, despite a lack of trust in government institutions. The conference featured insights from non-science communicators, rich discussions, and breakout sessions across various sectors. It also addressed access to scientific knowledge, focusing on connectivity and the effective use of digital tools.

Upcoming NSTF events include:

- **Climate, Environment, Water, and Food discussion forum on 1–2 October**, co-hosted with science councils and statutory bodies. This event will explore mandates relating to climate change, environmental protection, water management, and food security, showcasing current research and identifying priority areas for government support.
- A **Quantum Science and Technology discussion forum** is planned for **November**, featuring Professor Andrew Forbes, winner of the Special Annual Theme Award, and his QT initiative. This forum will highlight SA's contributions to cutting-edge quantum research, albeit on a small scale.

- NSTF will also participate in **Science Forum South Africa** at the **CSIR ICC at the end of November**, organised by the DSTI. Attendance is free, and NSTF encourages participants to engage and network. Both NSTF and STEMulator.org will have exhibition stalls.

11.3 2025/2026 NSTF-South32 Awards: Call for nominations

Jansie informed the meeting that preparations are underway for the next call for nominations for the NSTF South32 Awards, expected in early November. The awards recognise achievements not only in research but also in application, communication, data innovation, and more. The NSTF-South32 Awards Dinner is scheduled for mid-July 2026.

11.4 NSTF AGM, 7 November on Zoom and NSTF Chairperson position: Call for nominations

The NSTF Annual General Meeting is set for 7 November, and all are encouraged to attend to ensure quorum and to receive updates on all NSTF activities, including proSET. Additionally, there is an open call for nominations for the new NSTF Chairperson to replace Professor Jeffrey Mphahlele, who will be stepping down after a commendable three-year term.

11.5 2025/2026 Theme

Jansie reported that the NSTF theme for the coming year will be "**Healthy Aging through Sustainable Science**", aligning with the UN Decade of Healthy Aging. This multidisciplinary theme spans medical sciences, social sciences, welfare, well-being, and technological innovation. A discussion forum on the theme is planned (ideally earlier in the year), and a special award will be presented at the next NSTF Awards for excellence in research and innovation in this field.

With no additional comments, the report from Jansie was noted.

12. General and closure of the meeting

During the closing remarks, a significant omission from the earlier presentation was corrected by Richard, who acknowledged the valuable contribution made by the Geological Society, specifically through Dr Tanya Marshall. Approximately 18 months prior, the Society had provided a substantial amount of geological material intended for use in the STEMulator.org project. While there had been prior criticism for not utilising this material, due in part to limited funding and resource constraints, the team eventually allocated proSET funds to integrate the content. This included working closely with Dr Tanya Marshall, who collaborated intensively with the developer to structure and lay out the geological section. As a result, around twelve new pages focused on geology have been successfully added to the STEMulator.org. Richard expressed regret that Professor Enslin had left the meeting before this could be acknowledged and asked that appreciation be passed on to her. He emphasised the team's pride in now being able to showcase this new geological content.

Mr Maartens then invited any final comments. Dr Oosthuizen (Society for Automation, Instrumentation, Mechatronics and Computer Engineering (SAIMC)) confirmed that everything was clear from his side, and no further input was provided. The meeting concluded with the Mr Maartens extending thanks to all participants, wishing them a joyful festive season, and humorously noting how quickly the end of the year was approaching. All attendees exchanged farewells and holiday wishes before the meeting was formally adjourned.

APPENDIX 1: ATTENDANCE REGISTER

proSET Committee members

Society for Automation, Instrumentation, Mechatronics and Computer Engineering- SAIMC	Dr	Christiaan	Oosthuizen
STEMulator	Dr	Gerda	Botha
South African Chemical Institute - SACI	Prof	Helen	Drummond
Society for Automation, Instrumentation, Mechatronics and Computer Engineering- SAIMC	Mr	Johan	Maartens
Southern African Association for Research of Maths, Science and Technology & Education - SAARMSTE	Prof	Eunice	Nyamupangedengu
STEMulator	Mr	Richard	Gundersen
Institute of Information Technology Professionals South Africa - IITPSA	Mr	Tony	Parry
South African Council for Natural Scientific Professions - SACNASP	Prof	Khathutshelo	Nephawe

proSET member representatives

Member organisation	Title	Name	Surname
Chamber of Engineering Technology - COET	Mr	Pat	Moncur
Geo-Information Society of South Africa - GISSA	Mrs	Janusha	Singh
Geological Society of South Africa - GSSA	Dr	Craig	Smith
Geological Society of South Africa - GSSA	Prof	Gillian	Drennan
Grassland Society of Southern Africa - GSSA	Dr	Ntuthuko	Mkhize
Institution of Municipal engineering of+B8:B30 South Africa - IMESA	Mr	Vuyani	Gxagxama
International Association of Impact Assessment South Africa - IAIASA	Ms	Susan	George
Operations Research Society of Southern Africa - ORSSA	Mr	David	Clark
Physiology Society of Southern Africa - PSSA	Prof	Lebo	Gafane-Matemane
South African Academy of Engineering - SAAE	Dr	Christine	Render
South African Academy of Science and Arts - SAASA	Dr	Stefan	van Zyl
South African Association for Food Science and Technology – SAAFoST	Mrs	Irene	Burke
South African Association for Food Science and Technology – SAAFoST	Mr	Tsetse	Baloyi
Southern African Association for Research of Maths, Science and Technology & Education - SAARMSTE	Prof	Eunice	Nyamupangedengu
South African Council for the Architectural Profession (SACAP)	Mr	Munetsi	Chiunda
South African Chemical Institute - SACI	Dr	Xolani	Nocanda
South African Genetics Society - SAGS	Dr	Lerato	Diseko
Southern African Institute for Industrial Engineering - SAIIE	Mr	Prince	Mkosana
South African Institute of Agricultural Engineers - SAIAE	Mr	Senzo	Masikane
South African Geophysical Association (SAGA)	Dr	Stephanie	Enslin

South African Institution of Chemical Engineers - SAICHE	Prof	David	Lokhat
Operations Research Society of Southern Africa - ORSSA	Mr	Johan	Maartens
Southern African Institute of Mining and Metallurgy - SAIMM	Mr	Kondwani	Banda
South African Institute of Physics - SAIP	Dr	Brian	Masara
South African Society for Animal Science - SASAS	Prof	Hettie	Schonfeldt
South African Society of Biochemical & Molecular Biology - SASBMB	Prof	Jo-Anne	de la Mare
South African Young Academy of Science - SAYAS	Dr	Avela	Majavu
Zoological Society of Southern Africa - ZSSA	Dr	Seth	Eiseb

NSTF and service providers

NSTF	Ms	Mankwe	Mojapelo
NSTF	Ms	Jansie	Niehaus
NSTF	Ms	Wilna	Eksteen
NSTF	Ms	Itumeleng	Ndlovu
NSTF	Mr	Barnard	Manne
NSTF	Mr	Matome	Mphela

APPENDIX 2: APOLOGIES

Member organisation	Name	Position
Grassland Society of Southern Africa - GSSA	Dr Michelle Tedder	Main Rep
Grassland Society of Southern Africa - GSSA	Ms Minette van Lingen	Alternate Rep
Geological Society of South Africa - GSSA	Prof Albertus Smith	proSET Committee member
International Council on Systems Engineering - INCOSE SA	Mr Basie Jansen	Main Rep
Mine Ventilation Society of South Africa - MVSSA	Mr Stephan Bergh	Alternate Rep
South African Academy for Arts and Sciences - SAASA	Prof Hannes Rautenbach	Main Rep
South African Institute of Agricultural Engineers - SAIAE	Mr Stefaans Erasmus	Main Rep
South African Institution of Civil Engineering - SAICE	Mr Tom McKune	Main Rep
South African Institution of Civil Engineering - SAICE	Mr Tauqeer Ahmed	Alternate to attend
Southern African Institute for Industrial Engineering - SAIIE	Ms Chantelle du Plessis	Alternate Rep
South African Society for Animal Science - SASAS	Prof Carina Visser	Main Rep
South African Science Olympiad - SASO	Mr Robin Naidoo	Main Rep
South African Sugarcane Research Institute - SASRI	Dr Shadrack Moeophuli	Main Rep
South African Sugarcane Research Institute - SASRI	Dr Riekert van Heerden	Alternate Rep
Water Institute of Southern Africa - WISA	Prof Tobias Barnard	proSET Committee member