Personal Details

Last Name	:	Sluijs
First Name	:	Teun
Residence	:	Amsterdam, Netherlands
Date of birth	:	09-05-1994
Website	:	www.loopsystems.io

WORK EXPERIENCE

Jan 2024 - Present

LOOP Systems Thinking

Position: *Owner*

Activities: *Systems Thinking, System Dynamics, stakeholder engagement, group model building, qualitative / quantitative analysis, short courses*

In the current setting, I am building the company LOOP from the ground up. The company applies system dynamics on a variety of projects on contractual basis. The projects we take on are a variety of different complex problems and in different roles as facilitators/coaches/model builders, ranging broadly in domains from e.g. healthcare to operations / cost-effectivity research.

Role(s):

- Group Model Building Processes / facilitation
- Creating System Dynamics models (qualitative as well as quantitative)
- Giving 4-5 day short courses
- Mentoring in Systems Thinking

Dec 2022 - Dec 2023.

Trending Jobs

Position: *Chief Executive Officer (CEO)*

Activities: *Steering the ship*

Trending Jobs connects millions of job seekers with relevant opportunities across the USA, sending around 1.5 million targeted emails daily (>$1M ARR). The platform leverages data analytics, XML, and API technologies to create a personalized job-seeking experience and seamlessly integrate partner candidates and job listings.

Role(s):

- Managed partnerships with top-tier recruitment providers.
- Developed new business opportunities and strategies.
- Oversaw budgeting and financial planning.
- Led strategic initiatives to scale and optimize the platform.

Dec 2019 - Dec 2022.

TNO Healthy Living

Position: *Scientist Integrator*

Activities: *Systems thinking, System dynamics, Complexity, Stakeholder-driven Processes*

TNO (Nederlandse Organisatie voor Toegepast Natuurwetenschappelijk Onderzoek), translated as the Netherlands Organisation for Applied Scientific Research. The institute collaborates with businesses, government agencies, and research organizations to develop innovative solutions in technology, health, defense, energy, and environmental sustainability. TNO is the leading institute on the forefront of Dutch innovation and contributes to the economic and societal development of the Netherlands.

Relevant projects (amongst others):

PPS Innovation in workplace well-being (IWW)

In the PPS IWW, a collaboration between Deloitte, Zilveren Kruis, DSM, Gemeente Amsterdam and Achmea we aim to make a data-driven platform of employee well-being via the method of System Dynamics. Together with the partners we built a well-being learning community. We have delivered a prototype of an interactive well-being dashboard (TRL 5-6) for the employee as well as the team lead and HR management. The dashboard is based on dynamic differential equations in which all factors of well
being and the interrelations thereof are taken into account. By means of scenario simulations we portray the possible effects of different interventions on different employees on persona level.

Role(s)

- Together with a DSS colleague, I was responsible for quantifying and interfacing the model in Stella Architect using System Dynamics. The previous system analysis of wellbeing served as the basis, and we proceeded with input from partners and TNO internal expertise.

Current state

The product was well-received by the partners (there are talks of deploying the dashboard internationally) and we are currently in the final phase of constructing the agreement for IWW phase 3.

Links & Papers

- TNO webinar in which I explain the interface: On demand
- Niks, I., Veldhuis, G., van Zwieten, M.H.J., Sluijs, T., Wiezer, N.M., & Wortelboer, H.M. *Individual Workplace Wellbeing captured into a literature- and stakeholders-based causal loop diagram.* International Journal of Environmental Research and Public Health, 19(15), 8925.

ERP Wise Policy – Case Mobility Rotterdam

In ERP wise policy, a multidisciplinary collaboration between 30 researchers within TNO, we aim to develop a tool that supports policy making on wellbeing via data-driven complex modelling. The results from these models are being portrayed in the so-called 'wise cube' which is a support tool that can portray possible outcomes of an intervention in a visually attractive way.

Role(s)

- To conduct a group model building exercise with the team to tackle mobility in relation to wellbeing in Rotterdam. The resulting MARVEL model is an exploration of the interventions 'one way road, separate bike lane andmore parking policy' on several wellbeing components for different target groups. The model was quantified in proof-of-concept accordingly and has been taken up in the wise cube.
- Give guidance to a masters student in System Dynamics to form and quantify the model.

Current state

- The model is selected as the focus model for the ERP, and together with Rob van Waas I will perform a further exploration on the quantification of the wellbeing components via the VENSIM software.

Links & Papers

- Application of the wise cube, case mobility: Wise CUBE (tno.nl)
- T. Vonk, C. Smit-Rietveld, & T. Sluijs *ERP WISE Policy Making, Mobiliteitscasus Rotterdam, TNO Rapport* (TNO 2022 P10526a): link

Netwerkaanpak Overgewicht Nederland

This project, funded by VWS in collaboration with Partnership Overweight Netherlands and Erasmus MC, aims to deliver a platform for professionals in the social and medical fields to support system change in reducing overweight and diabetes. The "Healthy Future" Dashboard features: (1) A multi-causality map of overweight and T2D, highlighting key loops at micro, meso, and macro levels; (2) End-user monitoring of local causes and intervention effects for overweight and T2D, considering ethnicity and socio-economic status, to inform follow-up projects; (3) A schematic of existing and proposed local social and care services, including scenario simulations for optimizing client routes; (4) Possible cost-effective healthcare-saving measures for integrative and personalized coaching programs in the Netherlands.

Role(s):

- To develop the multi-causality map by making use of stakeholder input through workshops. • Responsible for the quantification of the model as well as bringing the information flow together for creating the platform in retrospect and localizing the professionals. For this, we were in constant correspondence with the 'proeftuin' of the Rotterdam municipality.

- Giving guidance to a masters student from TUDelft for an exploration in the development of the model.

Links & Papers

- Information 'ketenaanpak overgewicht volwassenen': Link

KIP Human-robot interaction

In this project with WHTwe are collecting the determinants of safe human-robot interaction by making us e of a delphi method with international stakeholders. The resulting MARVEL model serves as a basis for the standardization of safety requirements in the human-robot interactions.

Role(s)

- Guide the team in a participatory MARVEL setting, which accumulated in the facilitation of a 4-hour work-session with international experts by making use of the online MURAL tooling.

Links and papers:

- Link to my instructions to the group of the MURAL session: Link
- Steijn, W. M. P., Van Gulijk, C., Van der Beek, D., & Sluijs, T. (2023). A System-Dynamic Model for Human–Robot Interaction; Solving the Puzzle of Complex Interactions. *Safety*, *9*(1), 1.

KIP Lifestyle Change Through Systems Change

The KIP Lifestyle Change Through Systems change (unit Energy Transition Studies – Social Innovation) is about the sustainability of clothing. The project, that started in January 2022, entails a participatory MARVEL approach, in an attempt to perform a holistic systems analysis on the micro-meso and macro factors of the clothing branche.

Role(s)

- Guide the team (4 pers) in a participatory MARVEL setting, from start to finish.
- Talking to stakeholders during the interview sessions,
- Giving a 3,5 day MARVEL course to the team

Multi Problem Households (MPH)

The macro goal of this Ministry of J&V project is to innovate the government's policy formulation process, focusing on multi-problem households (MPH). Using the MARVEL method, the project aims to integrally map MPHs in the Netherlands. The hypothesis is depicted as a causal map. The ministry and TNO have organized participatory meetings to formulate common models, conducted systematic studies, investigated microdata, and integrated the results into both qualitative and quantitative models.

Role(s):

- To investigate the focus domain 'lifestyle' and portray this in a MARVEL model.
- Have conversations with experts on the portraying of the 'lifestyle' domain in relation to MPH
- To write a section of the report for dissemination to J&V.

Links & papers:

- TNO 2020 R11573

Single Papers: The Patient Journey & Burnout dynamics

Paper 1 presents a System Dynamics model to help policymakers and health professionals understand the patient journey of Type 2 Diabetes (T2DM) and evaluate the impact of lifestyle intervention programs on societal costs in the Netherlands. The model integrates data on diabetes demographics, intervention initiatives, and their costs, providing insights into the effectiveness of these programs and serving as a foundation for further research and funding applications. Paper 2 used System Dynamics simulations to understand workplace burnout, creating a causal loop diagram (CLD) and translating it into a quantitative model. Simulations highlighted the complex interactions and feedback loops among individual behaviors and social influences, offering insights for early and effective interventions.

Role(s):

- Conducted multiple stakeholder discussions on T2DM.
- Quantified and parameterized the T2DM model for accuracy.

- Adapted the model into a Visual User Interface using Stella Architect.
- Apprehend and refine the existing Burnout model
- Edit and iterate the Burnout paper

Links & papers:

- Sluijs, T., Lokkers, L., Özsezen, S., Veldhuis, G. A., & Wortelboer, H. M. (2021). An innovative approach for decision-making on designing lifestyle programs to reduce type 2 diabetes on dutch population level using dynamic simulations. *Frontiers in public health*, *9*, 652694.
- Veldhuis, G. A., Sluijs, T., van Zwieten, M. H., Bouwman, J., Wiezer, N. M., & Wortelboer, H. M. (2020). A proof-of-concept system dynamics simulation model of the development of burnout and recovery using retrospective case data. International Journal of Environmental Research and Public Health, 17(16), 5964.

Feb 2019 - Dec 2019
Algoa Bay Marine Spatial Planning
Employer : *One Ocean Hub*
Position : *Process lead / consultant / research associate*

This consultancy project, funded by the One Ocean Hub and a collaboration between 35+ universities and research institutes, aimed to draft South Africa's first marine spatial plan. The framework we developed (AlgoaMSAT) uses system dynamics modelling (SDM) to support marine spatial planning (MSP). It provides a holistic, cross-sectoral overview of human use dynamics for sustainable management and serves as a platform for scenario and trade-off analyses. The project has two phases. **Phase 1**: Collect data and model the biophysical and governance systems in Algoa Bay. **Phase 2**: Address the socio-economic system and integrate all three systems into an overall model to inform MSP decisions in the Bay.

Role(s)

- Developing a visual supportive tool for integrated decision making and making the Bay sustainable whilst ensuring maximal economic prosperity under operation Phakisa.
- Process lead on the Algoa Bay Collaborative Dynamic Modelling Process Organising multiple system dynamics workshops throughout the country
- Capacity development in the Institute of Coastal and Marine Research, intensively mentoring System Dynamics to two PhD candidates and a postdoc and pro-bono mentoring of two masters students in Johannesburg.
- External consultancy project with the Centre of Marine Research and on Nelson Mandela University, collaborating with multiple stakeholders to achieve expert input for the model and ultimately hosting a multi-sectoral stakeholder workshop through a Collaborative Dynamic Modelling process (CoDyM).

Current state

- The AlgoaMSAT tool has won the first prize for the Global Challenges University Alliance 2030. The project is still on-going.

Links & Papers:

- Global challenges research fund: Link
- One Ocean Hub: Link
- Interface: On demand
- Award: Link

Feb 2018 - Nov 2018
ACTDESAL
Employer : *University of Cape Town*
Position : *Visiting researcher*

Exploring the dynamics and financial, socio-economic, and environmental implications of incorporating long-term desalination into Cape Town's water supply, this project aims to develop a visual interface in Stella Architect as a decision support tool for both technical as well as non-technical stakeholders. The model is a result of collaboration between water researchers from the universities of Cape Town and Stellenbosch, government officials, engineers, environmental specialists, affected communities, civil society groups, and private funders.

Role(s)

- Responsible for the construction of the ACTWater (Assessment of Cape Town Water) framework •
- Stakeholder analysis, stakeholder engagement, system analysis, model construction and validation, developing a visual interface.
- Water management of Cape Town in times of crisis.

Current state

- The project has been adopted by fellow researchers who are exploring further funding options with two post-doctoral fellows from the African Development Institute, the directors of Stellenbosch University and Futurewater Institute Cape Town, regional government, SANDIA labs, and the University of New Mexico

Links & Papers

- Interface : Link
- Paper: Sluijs, T., (2018) *ACTDesal: A System Dynamics Model in Conversation A systemic assessment of Cape Town's Opportunities in Water Augmentation*. Dissertação para obtenção do Grau de Mestre em Dinâmica de Sistemas (Mestrado Europeu) (ru.nl)

Dec 2017 - Apr 2018
Traeen Management AS
Employer : *Traeen Management AS*
Position : *Project modeller*

Constructing a model with a multidisciplinary team for the municipality of Hordaland, Norway. The model involved multiple sectors as transport, population, health effects to analyze the current implementation of the Paris Climate Agreement in Norway and its municipal implementation.

Role(s)

- Building website
- Performing a cost-benefit analysis
- Creating value through creating learning material in System Dynamics.

Jan 2013 - Dec 2018
Cayboo
Employer : *Cayboo BV*
Position : *Account Manager*

Family-owned business on diverse bamboo products, helping out from the inception of the company to its current state, a wholesale as well as retail company.

Role(s)

- Mostly involved in international fairs and relations
- Providing input on the business strategy

EDUCATION

2016-2018: Erasmus Mundus in System Dynamics, Universities Norway – Lisbon – Nijmegen – Cape Town

2012-2016: Business Communications & pre-master Business Administration, Radboud University Nijmegen

2006-2012: Gymnasium Trevianum Scholengroep Sittard

Aug 2016	-	Jan 2017		EMSD – Technical fundamentals of System Dynamics, Universitetet I Bergen, Norway	Diploma: yes, M.Phil
Mar 2017	-	July 2017		EMSD – Environmental Engineering, NOVA technical University Lisbon, Portugal	Diploma: yes, MSc.
Aug 2017	-	Feb 2018		EMSD – Group Model Building, Radboud University Nijmegen	Diploma: yes, MSc.BA.

Sept 2012	-	Aug 2016		Business Communications, Radboud University Nijmegen (Bachelor), simultaneously pre-master Business Administration	Diploma: yes
Aug 2006	-	Jul 2012		Gymnasium Trevianum Scholengroep Sittard	Diploma: yes

Projects during education

Nov 2016	-	Jan 2017		Timeboo.eu Optimization model though Systems Analysis. Revenue optimization: 6%
Apr 2017	-	July 2017		Green Growth Initiative Portugal: reductions of NOx emissions through policymaking in the city of Lisbon
Oct 2017	-	Jan 2018		The Dutch Criminal Justice Chain: Group model building through policymaking
Dec 2017	-	Feb 2018		Infrastructure Norway: modelling for maintaining the Paris Agreement – Traeen BV

Thesis

March 2018	-	Nov 2018		Visiting researcher in Cape Town, South Africa: Long-term assessment of water management strategies in Cape Town through System Dynamics. Grade: 18/20 (Portuguese education system) or A (american education system)

Presentations & conference proceedings papers (amongst others)

36th International System Dynamics Society Conference – Reykjavik, Iceland: conference volunteer 37th International System Dynamics Society Conference – Albequerque, New Mexico: parallel session, *ACTDesal: a model in conversation*

System Dynamics society: BeNeLux chapter conference – Den Haag: parallel session, *ACTDesal: a model in conversation*

System Dynamics Society, South African Chapter 6th annual conference – Johannesburg: parallel session – presented by J. Clifford-Holmes

System Dynamics Society, South African Chapter 7th annual conference – Stellenbosch: lightning session, *Marine Sustainability Index, A Management Framework for Algoa Bay*

ArtsenLeefstijl congress Lifestyle4health Poster presentation – *The Patient Journey*

Utrecht Personalised Nutrition and Health congress poster presentation – *The Patient Journey* – online

6th International Conference on Wellbeing at Work 2022: Wellbeing in hectic times – online: oral session, *An innovative application in the method of System Dynamics that captures relative changes in determinants of workplace wellbeing to develop more personalized interventions.*

39th International System Dynamics Society Conference – Frankfurt, Germany, model expo, *Innovation in Workplace Wellbeing*

Language Skills

English: *Fluent* Dutch: *Fluent* German: *Basic*

Technical Skills

Stella Architect
VENSIM
PowerSIM
Group Model Building
MARVEL