

LAND ADMINISTRATION: IMPROVE PERFORMANCE by TESTING

A STRATEGY DYNAMICS APPROACH

Special Reference to Developing Economies

This book shows how proposals to improve performance in land administration can be tested for effectiveness and sustainability before investment, and managed for sustainability, post aid.

Ken Lyons

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It is anticipated that other chapters will be written and made available on the website from time to time.

PREFACE

The central theme of this book is that, using a Strategy Dynamics (SD) approach, it is possible to *Test for Effectiveness and Sustainability*, quantitatively and transparently, any *Performance Improvement Proposals (PIP)* in land administration (LA) during project design, and before large \$s are committed, and then use the SD approach to assist managing for sustainability, post aid. The focus is on LA in developing economies.

Most would agree that secure and enforceable land/ property rights, and supporting effective and efficient land administration systems are a necessary but not sufficient condition for social stability and economic development.

Over many years, many aid donors and development banks have funded projects to improve land administration in developing economies. The literature, formal and grey, including anecdotal comments, indicates that wide success is elusive, and that a proportion of these projects do not fully achieve the design objectives, and/or do not achieve the hoped for level of sustainability of benefit flow, post international development assistance (IDA).

There is a need for more tools to assist and test project design objectives and the sustainability of improvements, post IDA.

This book aims to show, using illustrative examples in land administration, how an SD Approach can add value to IDA project design by enabling the *Testing for Effectiveness and Sustainability of Performance Improvement Proposals (PIP)* during project design, and before large \$s are committed. It will also show how SD can be used during project appraisal, and monitoring and evaluation. The SD model becomes a living business model that can continue to be used post IDA by the in-country agency to manage for sustainability of improvements.

The Strategy Dynamics approach and the supporting simulation software, Sysdea (now Silico), were developed by Dr Kim Warren of Strategy Dynamics Ltd. The aim of Strategy Dynamics is to improve the performance of a system. Strategy Dynamics is based on the well developed field of system dynamics.

Acknowledgements

To my wife, Kerry, for indulging me as I undertook this learning journey, and also for much essential editing. To David Hebblethwaite, a valued colleague who has worked with me on many land administration tasks, both in Australia and in many developing economies. To Jair Albert Andrade Ortiz, a young colleague, who knows much more about system dynamics than I, for reading drafts and for providing valuable comments. To Don Grant AO, a seasoned professional, for reading all the chapters and providing sanity checks. Last but not least, to Dr Kim Warren for his patient advice and tolerance in answering mundane queries as I developed models, and for providing comments on various chapters. Many unnamed have assisted in various ways. However, all errors and omissions are mine.

The Author

Ken has had a long and varied career. In later years he spent over 20 years working on land administration development projects in a variety of positions (technical project director, design team leader, on monitoring missions, technical advisor) and countries (mainly in the South Pacific and S.E .Asia). He holds Bachelor, Master and PhD degrees

He is an Emeritus Professor of the University of Queensland where he was Head of the Geographical Sciences Department. He founded the Australian Key Centre in Land Information Studies (a Federal Government Centre of Excellence). After leaving academe he led his own consulting company for 30 years and consulted in a wide variety of sectors. His early career was as an Australian army officer specializing in surveying and mapping in Australia and on active service. He is a graduate of the Royal Military College, Duntroon. He was also involved in terrain evaluation, remote sensing, transport, and operations.

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FORWARD

By Dr Don Grant

Land Administration Programmes often endure fraught passages due to a range of obstacles. These can include a lack of focus on the cultural issues, a sometimes over emphasis on technology, the reluctance by institutions to change and the perceived or real impact on special interest groups.

Traditionally, good aid project design has been more art than science. It has relied on project designers and appraisers having considerable depth of hard-won land administration experience. Techniques along the lines of the Log frame approach became almost mandatory. They were simple to comprehend and brought what seemed to be order to the design of projects. Attempts at monitoring were made and again formulae were adopted which gave some credence to evaluation of progress. However, little science has been applied to design, and to monitoring and assessing the likely outcomes of Land Administration Programmes.

Ken's book shows how more science can be added to designing land administration programmes by using the "Strategy Dynamics" approach developed by Dr Kim Warren. This approach enables the "testing" of designs for efficacy and sustainability before committing funding. Another contribution of this book is its focus on the achievement of management performance improvement objectives, rather than the technical tools of the land administration trade. By applying Strategy Dynamics to the land administration conundrum, Ken has revealed the detail of how land administration operates as a system, and *where* and *how* performance can be improved.

To my knowledge, there has been no previous application of system dynamics to the often ignored complexity of Land Administration. Emeritus Professor Ken Lyons has done this. Scenarios can be developed and project outputs and outcomes examined, not only during the short term when aid assistance is provided, but also most importantly for the long-term post aid sustainability of benefits.

The Strategy Dynamics approach can be carried out in country in cooperation with managers. Jointly developing schematic diagrams of the core structure of the system to be improved is effective for group learning and for gaining an in-depth understanding of the issues and proposed improvements. This enhances buy-in from those in country who are the key to a successful project, as they must live with the results. The resultant quantitative models can be used *after* design as Living Business Models to help evaluate progress and assist in managing and modifying the land administration improvement effort.

This book provides steps for applying Strategy Dynamics and demonstrates its use in a number of typical land administration situations. A strength of the Strategy Dynamics approach is that if the logic, schematics that Ken has developed do not fit your situation, then you can develop an alternative by using the principles of Strategy Dynamics.

This work is a major contribution. It meets a need which, from my knowledge, has not been addressed in the Land Administration arena. It is comprehensive and relevant with mind-blowing detail and supporting illustrations. It is a hand-in-hand passage through the intricacies of Land Administration from a clearly and newly evolved approach. It is a worthy additional tool in the land administration toolbox.

Dr Don Grant AO, RFD, FRICS, FIS, FIE
Surveyor General of New South Wales for 14 years
Chair of Public Sector Mapping Agencies, Australia for 10 years
Holder of Honorary Doctorates from three Australian Universities
Consulted to nineteen countries on Land Administration

By Dr Kim Warren

The method Ken has used in this great book has a long and distinguished track-record of contributing actionable insight across a wide range of social, economic, environmental and business domains. "System Dynamics" was developed at MIT in the 1960s, and it works powerfully well because it applies the essence of engineering control theory to any system. The essential principles are not too complicated.

First, things accumulate and deplete over time - such as the number of people with a disease, employees in an organisation, personal or Government debt, criminals in a city ... or records in a land registry. Next, those processes depend on each other; the rate people catch a disease depends on the number who already have it, the rate criminals are caught depends on the number of police officers ... and the rate that land registry records are added to depends on the number of skilled staff. Connect up these links and you have a model of how the system works. Better still, that model can be quantified - we can work out *how fast* each element of the system changes, due to the factors on which it depends.

This method has helped clarify, and mostly solve, some extremely demanding challenges. It has provided the basis for protecting endangered fishing stocks, informed the World Health Organisation's strategy to eradicate polio, provides the platform for the maintenance of the US navy's vessels. It even presaged the global environmental crisis as far back as the 1970s through the work of the Club of Rome. It is regrettable that political leaders have chosen to be in denial of those insights ever since, although system dynamics models are currently used to support inter-governmental negotiations regarding climate change.

In this book, Ken has used a particular approach to developing and using such models, known as "strategy dynamics". This was developed to make the system dynamics method more accessible to organisational leaders, initially business executives. This is achieved by making explicit more of how the real-world system is behaving - not just the model's results, but *why* those results arise. And this makes clearer how management can *change* that behaviour and those results. Models also track real-world data alongside simulated results, giving great confidence in both the model's validity and in the likely success of the policies that it informs. You can take many of Ken's models and, with limited changes, adapt them to capture *your* situation and improve the results *you* want to achieve.

Dr Kim Warren

Principal, Strategy Dynamics Limited

Author, Strategic Management Dynamics (2008), John Wiley & Sons

Holder of the 2005 System Dynamics Society's Jay Wright Forrester Award for a most important contribution to the field.

Former strategy Director at Whitbread PLC and faculty-member at London Business School. Visiting Professor at Universities in the USA, Taiwan and Austria

CHAPTER 1

INTRODUCTION

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Abbreviations

DFID	Department For International Development
IDA	International development assistance
FFP	Fit for purpose
FIG	International federation of surveyors
GLTN	Global land tool network
LA	Land administration
LIS	Land information system
LR	Land registry
NGO	Non government organisation
PIP	Performance improve proposals
SD	Strategy dynamics
UK	United Kingdom

CHAPTER 1

INTRODUCTION

1.0 Land and international development assistance

1.1 The importance of land and land administration in development

Few would argue that secure and enforceable land/property¹ rights, supported by effective and efficient land administration systems are not a fundamental factor to a country's social stability and economic development². Secure and enforceable property rights can be considered a necessary, but not sufficient condition for stability and development.

In developed economies the following largely exist:-secure and enforceable land/property rights over all geographic areas; relatively few land disputes or violent demonstrations; an active well-regulated land market; extensive amounts of development capital raised using land/property as collateral; an effective system of land administration.

Land administration (LA) can be considered as comprising the following: – policy, laws and regulations; the necessary institutions with their roles clearly defined, and procedural mechanisms in place and adhered to; provision of the necessary land services; the wide and ready provision of information on the legal and market status of land; the operation of the “land system”; the provision of independent dispute and appeals mechanisms; rare instances of corruption.

In many developing economies much of the above does not exist, or if it does, often only partially, and in limited geographic areas, or for certain groups, generally those who can afford to access it.

1.2 International development assistance in land administration

Over the years many international development banks and aid agencies have partnered with developing countries to fund and undertake a range of projects to strengthen LA in particular aspects, to widen its reach, both geographically and to the poorer segments of society. These international development assistance (IDA) projects can be bilateral or multilateral. They tend to be multimillion dollar and multiyear projects.

The goal of IDA projects is sustainability of the flow of benefits. e.g. that improvements and benefits obtained during IDA will continue to flow, and hopefully increase, after the IDA has ceased. In the vernacular, there is a hope that the improvements will “stick”.

The literature, formal and grey, and anecdotal comments tends to indicate that a proportion of IDA projects in land administration do not fully achieve the design objectives, and/or do not achieve the hoped for level of sustainability of benefit flow, post IDA. Several relatively recent reports provide assessments and lessons learnt from World Bank and UK (United Kingdom) DFID (Department for International Development) projects in LA. These reports are:- Satana S, Torhonen M, Anand A, Adlington G, (2014); Payne, G., Mitchell, J., Kozumbo, L., English, C. and Baldwin, R. (2015); World Bank (2016); Torhonen, M (2016); English C, A Locke, J Quan, J Feyertag, (2019). All of these papers make the point that LA is complex, sustainability must be designed for, and it will take time to happen. More will be drawn from these in later chapters.

There is a need for more tools to assist in the testing of project design objectives and testing for sustainability of improvements, post IDA. In subsequent chapters it will be shown how sustainability can be tested and designed for.

¹ Land and (real) property are used synonymously throughout this book

² See 7 Reasons for land and property rights to be at the top of the global agenda – World Bank Blogs Tuck L and Zakout Z 25 Mar 2019 https://blogs.worldbank.org/voices/7-reasons-land-and-property-rights-be-top-global-agenda?cid=ECR_E_NewsletterWeekly_EN_EXT&deliveryName=DM10746

2.0 The focus of this book – a SD approach to improve performance in LA

This book is concerned with adding a new tool to the land administration (LA) toolbox. The tool is based on Strategy Dynamics (SD) developed by Dr Kim Warren³, Warren K (2009). SD is based on the well developed field of system dynamics⁴.

SD has as its focus improving the performance of a function or organisation over time. It can be applied both to profit and not for profit situations. SD can be neatly encapsulated (Warren, 2009) as:-

- *The Determination* if a plan will work at all
- The *design* of a system so that it can perform well
- The *management* of a system so that it does perform well
- The *fixing* of a system if problems occur

This book seeks to show how the SD approach can be applied to:-

- Improve the strategy, design, buy in, and sustainability for IDA projects that seek to improve LA
- Assist to manage project implementation for sustainability of improvements, post IDA

3.0 The purpose of this book and who might find it useful

3.1 Purpose of this book

The purpose of this book is to:-

- Outline the SD approach, with examples, that allows a coherent evaluation of strategic alternatives to improve land administration (LA) and *to test for effectiveness and sustainability*, DURING project design, and BEFORE committing large funding for implementation.
- Show how to test for effectiveness and sustainability any *Performance Improvement Proposals* (PIP) in LA, in a transparent and quantifiable manner
- Show how M&E (monitoring and evaluation) of an improvement project can be enhanced by using the SD approach to compare actual to target improvements over time, and to examine the likely effects of revising performance targets
- Provide a number of illustrative hypothetical examples of using SD approach in various aspects of LA where IDA might be considered. These examples show the SD approach applied in design and also in managing a project during aid, and post aid. A focus is placed on identifying the likely conditions for sustainability of improvements post aid, when the host agency alone is responsible for recurring annual funding, maintenance, and performance
- Engender discussion concerning the efficacy of this SD approach for increasing the likelihood of success. Success is deemed to be the near complete achievement of project objectives, and long term sustainability of the benefit flow, post IDA

This book takes a pragmatic approach with an operational focus. It recognises that many improvements happen incrementally in an existing operational situation. The focus is on *improving the performance of an operational LA system*.

The use of the SD approach can be considered a new tool for the toolbox of LA practitioners in IDA.

It is NOT the purpose of this book to:-

- Produce an academic paper – the alternative title for this book could well be, *some thoughts from a retired practitioner with some field experience*
- Provide a comprehensive discourse on land administration - these can also be found elsewhere

³ See <https://strategydynamics.com/>

⁴ A field developed in the 1960s at MIT by Professor Jay Forrester.; https://en.wikipedia.org/wiki/System_dynamics

- Provide a comprehensive discourse on systems thinking, system dynamics, strategy dynamics, simulation modelling– these can be found elsewhere. Warren provides instructional material and examples⁵, and an example of applying SD in IDA in Nigeria in Aid for Trade⁶.
- Consider the pros and cons of any technical tool such as drones, high resolution satellite imagery, GNSS etc. – these are covered in depth in many places

3.2 The Rationale underpinning the use of Strategy Dynamics in Land Administration

The rationale is:-

- It is possible to test proposed improvements for effectiveness and sustainability post IDA using simulation, before investment dollars are committed
- Testing will improve design, and therefore project objectives are more likely to be achieved and be sustainable, post IDA
- LA as a whole is a complex *system*. Treating LA and proposed interventions as a *system* will provide insights not currently available, and will improve design. There are many who understand particular aspects of LA in great detail, but few who understand it as a whole, and fewer still who understand how it operates as a *system*.
- Much information is available on the technical tools for LA, their pros and cons etc., but much less is available on the *quantitative* evaluation of *strategic* objectives for LA
- Change in LA tends not to happen quickly, and long time frames may be necessary to achieve objectives and sustainability. Simulation is suitable to explore the likely effects of various rates of change in important parameters in system over long periods, especially post IDA.
- System dynamics and Strategy dynamics are used by for profit and not for profit organisations to develop and test strategy and business plans, before committing to investment. Why not do similar in LA?
- The SD approach adds value to current approaches and saves rather than makes work. The approach assists “buy in” from all stakeholders by making very clear, the *what*, by *when*, *how* and *why* improvement will occur. SD can also be used in M&E (monitoring and evaluation) to assist in managing the project during the period of aid, and post aid.

The SD schemas and models developed could be thought of as digital twins of the project or the improvement endeavour.

3.3 Who might find the book useful

There are several groups who might find parts of this book useful. They are:-

- Land administration experts who specialise in IDA and may be a part of a design, implementation or evaluation team for aid agencies or development banks
- IDA specialists in project design, implementation, monitoring and evaluation
- Aid Agencies and Development Banks may see merit in the SD approach to value add to their internal design and operational guidelines /formats
- NGOs (Non Government Organisation) who work in the land area
- Officials in Government and in Land Agencies in IDA recipient countries who may see the SD approach as a way to work more closely with donors, and to also gain a much clearer understanding of how and why an aid project should work over time, and what can be expected to be achieved, and by when
- Anyone with an interest in IDA and/or LA

3.4 The structure of the book

Structure

This book is divided into three Parts.

- Part A consists of three chapters which provide an introduction to LA, where the LA *system* fits in and IDA.
- Part B consists of five chapters which introduce Strategy Dynamics and its principles, and show its application to a relatively simple development task, that of removing a processing backlog in a Land

⁵ <https://www.sdcourses.com/>

⁶ <https://www.youtube.com/playlist?list=PL7cF528k5MjTe9ca7X3vxbMII3brauenD>

Registry (LR), and keeping it low, post IDA. How the SD approach adds value to current approaches is outlined.

- Part C consists of a number of chapters showing how SD can be applied to other areas of LA in more complex situations.

Accessing the book

The individual chapters of the book can be downloaded from <https://landadminsystems.com> . Also on the website are some short supporting videos.

This book is currently a work in progress. Further chapters are planned and others may be edited. As it stands it provides exposure to and understanding of SD, its usefulness as a tool in the LA toolbox and how its application can improve LA in developing economies.

Please note

- The focus in illustrative examples is on:
 - Showing how the SD approach can be applied to a particular performance improvement situation up to the stage of the development of a SCS. This includes PIPs and/or scenarios to be examined.
 - The results obtained from testing the PIPs/scenarios for effectiveness (with aid) and sustainability (post aid)
- The book does not provide instructions on how to build SD models. Quality online courses are available⁷ for those interested.
- The SD models used for testing are not included. Enquiries should be made to the author at kenlyonsspatial@gmail.com
- Some diagrams are hand drawn, depicting what might be sketched during a design mission
- All examples and models are hypothetical, for illustrative purposes only. No guarantee is made of correctness.
- Content does not represent recommendations for any specific circumstances. Advice of a competent professional should be sought

Options for reading

The structure need not be followed. A quick scan is recommended to identify areas of interest. To gain a quick idea of the SD approach it may be useful to read Chapter 1 (Introduction) and Chapter 8 (a summary of the SD approach, its characteristics and how it adds value to current approaches).

The illustrative examples

The illustrative examples are all hypothetical and drawn from operational entities in LA in developing economies.

The important point of these examples -

- Is not the example itself or the results obtained
- But rather how applying the SD approach shows the logic (for the operation and improvement of the system) transparently and quantified with no hidden assumptions.

If one does not find the logic (the structure of the model) shown appropriate for a situation then an alternative can be developed by applying the SD approach. *What Ifs* are easily carried out.

The SD approach can also be used in approaches such as Fit for Purpose (FFP) land administration where the focus is on serving the needs of citizens such as tenure security and sustainable land use. See FIG-World Bank (2014), and UNHABITAT et al (2016). The GLTN (Global Land Tool Network) is a leading organisation in applying FFP⁸.

⁷ <https://www.sdcourses.com/>

⁸ <https://gltn.net/>

4.0 The story behind this book

Over fifty two years ago, after field and office experience in Australia, I had my first long experience in a developing country. It made a strong impression. Ten years later I had two years heading a university department in surveying and land studies in another developing country. Following that was experience in the early days of digital cadasters, LIS (land information systems) and land administration in a developed country, Australia.

About 30 years ago that I started spending significant amounts of time on IDA projects concerned in some way with seeking to improve different aspects of land administration. I was very fortunate in being able to work in a range of countries and in diverse positions.

After some years, a large number of countries and projects, I, like many others, came to the view that achieving “stickability” of improvements and benefits was quite a challenge.

Several things struck me overall from my experience in both developed and developing countries.

- Firstly, that land administration is a very complex and largely hidden *system*, and while there were many who understood small parts of the system in great detail, there were few who understood it completely as a whole, let alone as a *system*.
- Secondly, that the cost to governments in running these systems well, and the costs to users in complying with them were very high, largely hidden, and probably only affordable in developed countries with well performing economies.
- Thirdly that change in land administration does not happen quickly, even in developed countries, let alone developing countries where culture is an important factor, and that it may be unreasonable to expect change to be achieved and to “stick” within the usually relatively short time periods of IDA assistance.
- Fourthly, that it was not unusual when coming into a country to find that there had been previous “land” projects with various levels of benefit “stickability”.
- Fifthly, that “stickability” depended in no small measure on incountry operations and maintenance budgets being adequate and sufficient resources being allocated to maintenance.

I had the feeling that there was a need for additional approaches (i.e. new tools in the project designer’s tool box), and to think of LA as a *system*, and to be able to test improvement proposals quantitatively before investing. While it is quite easy to come to the view that something new is needed, it is quite another matter to come up with something, and to be able to convince yourself, let alone others, that it has merit.

In my search for an additional approach I came across system dynamics and became convinced that it had merit. Then I came across Dr Kim Warren’s Strategy Dynamics and his modelling software, now Silico⁹, which I found very appealing, and have used throughout this book. Having recently retired, I have now been able to devote some time to come to grips with SD, and produce this book.

I hope readers will be tempted to try Strategy Dynamics in LA after perusing this book.

⁹ <https://www.silicoai.com/>

5.0 KEY POINTS

- Secure and enforceable land/property rights are fundamental factors in a country's social stability and economic development.
- Land Administration (LA) is the bundle of laws, institutions, procedures, services that set, regulate and enforce property rights, and regulate the land market.
- LA is more advanced, efficient and effective in developed than in developing economies.
- International Development Assistance (IDA) has been provided over many years aiming to improve land administration in developing economies. However the attainment and sustainability of wide spread benefits tends to be elusive.
- This book is concerned with an approach, Strategy Dynamics, which aims to improve the strategy, design, buy in, and sustainability for IDA projects in LA.
- SD has as its focus improving the performance of a function or organisation over time.
 - *The Determination* if a plan will work at all
 - The *design* of a system so that it can perform well
 - The *management of* a system so that it does perform well
 - The *fixing* of a system if problems occur

References

English C, A Locke, J Quan, J Feyertag, (2019). Securing land rights at scale: Lessons and guiding principles from DFID land tenure and land sector support programmes.

https://www.researchgate.net/publication/333658289_Securing_land_rights_at_scale_Lessons_and_guiding_principles_from_DFID_land_tenure_regularisation_and_land_sector_support_programmes_NonCommercial_Licence_CC_BY-NC_40

FIG-World Bank (2014), Fit for Purpose Land Administration.

<https://www.fig.net/resources/publications/figpub/pub60/Figpub60.pdf>

Payne, G., Mitchell, J., Kozumbo, L., English, C. and Baldwin, R. (2015). Legitimate land tenure and property rights: fostering compliance and development outcomes. London: DAI.

<https://assets.publishing.service.gov.uk/media/57a0896ded915d622c0001f9/61566-REA-Land-Q2publish.pdf>

Satana S, Torhonen M, Anand A, Adlington G, (2014), Economic Impact of 20 Years of ECA Land Registration Projects, Annual World Bank Conference on Land and Poverty. Washington DC, USA. March 24-27, 2014.

<https://www.oicrf.org/documents/40950/43224/Economic+impact+of+20+years+of+ECA+land+registration+projects.pdf/cd8a94c5-3f04-3e0e-8c9f-6d5413e663fa?t=1510229848480>

Torhonen, M (2016). Keys to Successful Land Administration, Lessons Learnt in 20 Years of ECA Land Projects. World Bank. <https://openknowledge.worldbank.org/handle/10986/24623>

UNHABITAT, GLTN, Kadaster (2016), Fit for Purpose Land Administration, Guiding Principles for Country Implementation https://www.fig.net/news/news_2016/2016_07_gltnguide/fit-for-purpose-land-adm-guiding-principles-for-country-implementation.pdf

Warren K (2009), Strategic Management Dynamics, John Wiley & Sons Ltd

World Bank (2016). Lessons from Land Administration Projects: A review of Project Performance Assessments. IEG Category 1 Learning Product. March 31, 2016.

<https://openknowledge.worldbank.org/handle/10986/24407?show=full&locale-attribute=en>