

# System Dynamics Society Strategy

## Interim Findings and Recommendations

Strategy Committee<sup>1</sup>: 25-Jan-2013

### Introduction

This Report summarises recommendations for means by which **the Society might increase progress in development of the field**. The report therefore considers the field as a whole, not solely the Society itself.

The report's **scope is incomplete** on some issues, but particularly so in regard to the consulting firms in the field and the providers of software and training services to the field. The actions required to **implement the strategy** are also incomplete, since they require input and support from those who might do so.

The Policy Council is asked to accept the Report's conclusions, recognising that most of the recommendations imply initiatives and efforts to be taken by certain officers and groups in the Society. Acceptance of the Report **does not** imply acceptance of decisions that would normally need to be submitted for PC approval Policy Council (PC) – notably new expenditures, the appointment of new Vice Presidents and changes to the role of SIGs.

The Report's findings arise from efforts taken early in 2012 to **collect opinions** from people with knowledge of System Dynamics (SD), concerning the field's development from 2005 to 2012, and **plausible aims** that might be pursued out to 2020. Those opinions were processed through a manual but **SD-compliant** analysis of the SD-field's operating system and its potential performance over that time-scale.

The Strategy Committee has considered those mid-term aims, and developed a set of **initiatives** and an initial list of **action-options** that might enable those aims to be realised. The report describes:

- (a) the desired medium-term future for the field
- (b) the short-list of principal initiatives
- (c) an incomplete list of actions to implement the strategy ... which may be converted to a time-phased plan.

Please comment or add to any of these items on the Policy Council discussion Forum.

### Contents

Executive Summary

1. Description of the process
2. A draft Vision for the field
3. Scale, progress and mid-term aims for system dynamics
  - in application domains (topics to which SD is applied, such as economics, environment, health ...)
  - on issues that span the whole field, such as education, consulting and the Society
4. Initiatives and actions to deliver the strategy

Throughout the Draft report, **highlighted text** indicates either important information that is missing, or possibly controversial issues with limited supporting information.

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## Executive Summary

### Vision for the field

The System Dynamics Society is an international, non-profit organization devoted to encouraging the development and use of system dynamics and systems thinking around the world. Its Vision for the field is that:

*System Dynamics will transform society by making improvements to decision-making in government, commerce and other organisations. Powerful examples of its impact will be widely known amongst the general public, and people with authority will be aware of how system dynamics can raise the effectiveness of the organisations they lead. Organisations will employ or seek support from large numbers of experienced professionals with deep skills that are defined, recognised and valued. Those professionals will emerge from Universities and other training institutions that provide high-quality training, drawing on an extensive resource of accessible and rigorous teaching materials. The topic will be understood and respected in the academic community. System dynamics will feature in all parts of the education system, leading to public understanding and demand for better policy-making throughout society.*

### State of the field

The main conclusions from the consultation about the state and potential of the field, and the system of elements that make it up are:

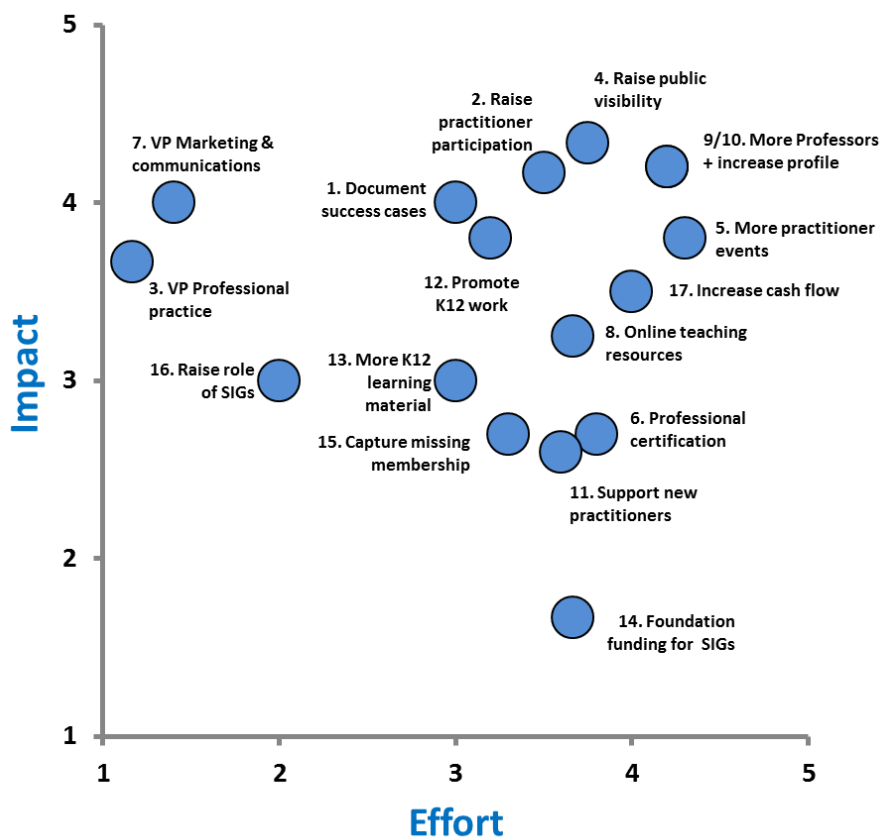
- The field naturally divides into **three main portions** – academia, practice, and pre-college schooling. This does not imply separation between those portions, merely that each consists of distinct and interdependent sets of resources. The practice portion is disadvantaged, relative to other professional fields, in being highly fragmented amongst **many application domains**.
- The field appears to have made **limited progress** in recent years towards what is believed to be a much greater potential scale and impact, and the Society can and should work to **pick up the pace** of that progress. Respondents to the consultation identified desirable increases in the rate of activity and growth of resources across the field – more so on some issues, such as public awareness, pre-college education, and well-documented cases, but less so on other issues, such as numbers of academics and higher-degree-level education.
- Within its current scale, the **academic portion** of the field is in reasonable healthy, although additional potential can and should be pursued. There is an established community of experienced academics, a moderate stream of quality publications, and good educational programs generating a flow of well-trained Masters/PhD level graduates. Challenges concern how to grow both the number of junior and tenured SD-focused Professors and how to raise their recognition and status relative to other fields.
- The **practice portion** of the field is in less good shape. Although much good quality and impactful work is being done, the mutual reinforcement that should exist between practitioners, their work and application knowledge, and the users/clients they serve is **barely functioning**. *(It is in better shape in certain domains, such as healthcare and environment, than others)*. The fragmentation between application domains does not help, but the most serious connection missing from the system is the lack of documentation and publicity of successful work. “*Just do good work*” is not enough – “*... and shout about it.*” needs to be added.
- The **pre-college schooling portion** of the field is in fair shape. A solid core of people in the Society are active in this aspect of system dynamics, established leaders are known and well respected within the community, and there are on-going practices and support activities. However, more progress is possible by incorporating these members more fully into the Society and strengthening the relationships between pre-college schooling of system dynamics and the academic and practice portions of the field.
- Not only is this under-functioning of the SD-practice system holding back the field’s fulfilment of its potential, it is also disadvantaging **newly-trained professionals**, through limited career

opportunities. This under-functioning of the practice-portion of the field also explains the large proportion of struggling, *isolated practitioners*.

- **The Society** could potentially act to fix the dysfunctional elements of the system, through efforts to re-engage the large fraction of SD practitioners who are not involved in the wider activities of the field or the Society. Key to this fix are actions to increase the role and **activity of SIGs** (since these represent the domains in which practice occurs), especially in encouraging active engagement by practitioners, delivering events and publicity within their domains, and identifying, presenting and **promoting high quality work** to the outside world. To achieve these aims, the Society will need to capture more of the missing practitioners into its membership, and raise its cash flow.

Figure 1 summarises the **main Initiatives** that the Strategy Committee feels might enable this consolidation of the field and acceleration of its progress. The implication is that priority should focus on items with **high impact and limited effort**, though there is interdependency between some items. A later section of the report makes a start on identifying actions that might contribute to each initiative.

Figure 1. The Effort required and potential Impact of recommended Initiatives to develop the field



### Possible outcomes

If successful, these initiatives may make it possible to achieve the faster rate of progress that the respondents to the consultation believe to be possible and desirable by 2020, including:

- a 3-fold increase in the number of well-documented high-quality cases of successful SD work, of general-media mentions of system dynamics, and the number of practice-oriented events taking place
- a 5-fold increase in SD-focused job placement of new graduates
- a 4-fold increase in the number of organisations purposefully using SD and a doubling of the number of SD-informed decision-makers in those organisations
- a doubling in the number of junior and tenured SD-focused professors in Universities, and in the rate of basic SD training for executives and other potential users of SD work

- a 5-fold increase in the number of pre-college (K-12) teachers using SD, and in the rate of education in schools and the graduation-rate of SD-informed young adults (*though even this falls short by orders-of-magnitude of a desirable outcome*).

# 1. The Process

Developing a strategy where none previously exists requires:

- clarifying a Vision for the medium- to long-future, expressed in terms to which people can relate
- setting out how “the system” works that should deliver those outcomes
- quantifying (approximately) the scale and rates-of-change to key parts of the system that must happen in order to achieve the desired outcomes
- extracting from these estimates the actions that need to be taken, at what rate, over what time, done by whom.

## Professional Societies

Most professional societies are made up of three main resources – the practitioners, the knowledge or methods they deploy, and the users of the work done by those practitioners (*supply, product and demand*). The work generates new knowledge, and its impact encourages new users to ask for more work, and new practitioners to join the field to do it.

Around this core, academics and teachers add to the field’s knowledge, train new-comers, feeding the practitioner population. An administrative system coordinates and promotes activity and may provide services, such as conferences, certification, publicity and information.

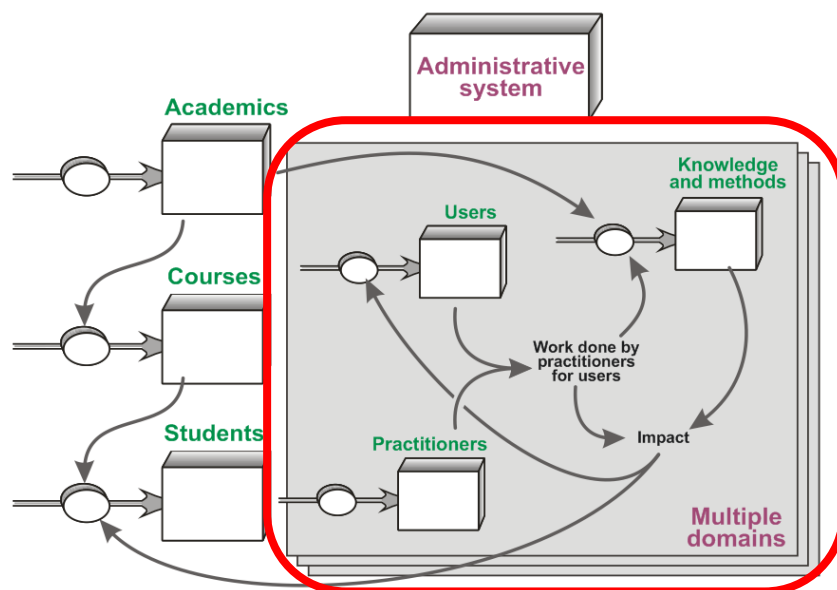
A notable *addition* for us is the pre-college (K-12) teaching initiative and the population of informed citizens that emerge from that process.

A notable *omission* for us, compared with other professional societies, is the lack of a certification system, with the body of knowledge (BoK), training and testing that would normally be part of such a system.

**A major challenge for us – different from most other professional fields – is that our users, practitioners and knowledge/methods are fragmented amongst multiple “application domains”: environment, health, economics, biology, business and so on.**

So the SD field consists of practitioners, users and knowledge “summed” across those domains, with the academic and pre-college sectors (“Academics” in Figure 2) and administrative system spanning all domains.

Figure 2: The resource structure of a professional field



## Stakeholders

The process aimed to address the interests of key stakeholder groups in the system dynamics field:

- Society Members (whether users, practitioners or academics)
- The wider community of practitioners, including consultants
- Users (corporate, governmental and other), represented indirectly through practitioners
- Academics and their institutions
- Students (adult and school/college-age)
- The providers of tools for deploying the knowledge, notably software providers (*this remains to be successfully accomplished*)
- Those involved in the administrative support system

Given the practical difficulties in communicating directly with such a diverse population, inputs were sought through a mid-scale group of about 50 people, having substantial experience across the different parts of Figure 2. This group included representatives of the following:

|   |  |                        |  |
|---|--|------------------------|--|
| <u>Society administration and critical functions.</u> | Finance & Admin<br>Admin and conference<br>Society procedures and protocols<br>Publications<br>Electronic presence<br>Meetings<br>Strategy Committee | <u>Domains (SIGs).</u> | Conflict, Defence, Security<br>Education<br>Energy<br>Environment<br>Health Policy<br>Information Science<br>Psychology<br>Bio-medical |
| <u>Stakeholders.</u>                                  | Students - adult<br>Students – pre-college (K-12)<br>Members and Chapters<br>Consulting<br>Software and other providers<br>Universities              | <u>Domains (other)</u> | Project Management<br>Economics<br>Business<br>Operations Management +<br>Supply chain<br>Public Policy                                |

Respondents were mostly people with many years' experience in the field, or with specific knowledge. The group was asked to provide:

- their Vision for the medium-term future of the field
- their estimates of the current state of the field (2012), its recent progress (since 2005), and plausible aims (for 2020)

Each person was asked to provide estimates for key indicators across any parts of the field with which they were familiar. Between 2 to 5 respondents provided information on each of the application domains. The responses were summed or averaged, and embedded in a quantified (but not simulated) field-wide model which displays:

- the key resources or stocks in the field, such as practitioners, cases, teachers
- the implied flow-rates to meet the mid-term aims, such as publication rates, and training rates
- other important indicators or enablers, such as SD projects undertaken, SD-related events, and the field's reputation
- ... and the interdependencies amongst these elements

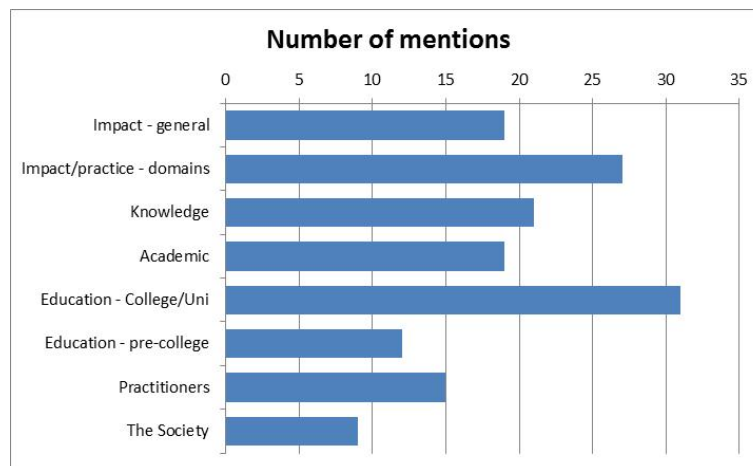
## Strategy initiatives and actions

From the model of the field, the Strategy Committee identified a short-list of required initiatives – broad sets of activity that will need to be done, at some rate, over some time, in order to achieve the desired outcomes.

## 2. A Vision for the field

The views of the respondents who were consulted on what should feature in a Vision for the future of the field is summarised in Figure 3, which results from coding their verbal statements.

Figure 3: Factors to feature in a Vision for the future of the field.



The number of mentions is not an unequivocal indication of the relative importance of each factor:

- infrequently mentioned items could nevertheless be seen by respondents as important
- items not mentioned could be 'taken as given' by some respondents
- enabling factors could have been under-stated relative to impact indicators

Nevertheless, Figure 3 gives a sense of what respondents feel is important in a Vision for the field. The main sub-topics under each broad heading, in descending order of mentions are as follows:

|                          |  |                                  |   |
|--------------------------|--|----------------------------------|---|
| <b>Impact - general</b>  | Widely known/understood<br>Big impact examples<br>Publicity<br>International penetration     | <b>Impact/practice - domains</b> | Senior demand<br>SD as a preferred method<br>Success stories<br>Uptake by non-SD folk<br>Articles |
| <b>Knowledge</b>         | Adoption by/with others<br>Cases<br>Domain knowledge/ tools<br>Conferences<br>SIGs/ Chapters | <b>Academic</b>                  | Papers in other fields'<br>Journals + Ranking<br>Quality of SD work<br>Academic path              |
| <b>Education: higher</b> | Taught in other topics<br>Learning materials<br>SD graduates<br>Programs/courses             | <b>Education: pre-college</b>    | Taught in other topics<br>Student numbers<br>Learning materials<br>Classes                        |
| <b>Practitioners</b>     | Certification<br>Quality of work<br>Numbers<br>Training                                      | <b>The Society</b>               | Member numbers<br>Out-reach/visibility<br>Services<br>Finance                                     |

**DRAFT Vision for the field:**

Based on the submissions received, the following statement offers a draft Vision statement for the field:

*System Dynamics will transform society by making improvements to decision-making in government, commerce and other organisations. Powerful examples of its impact will be widely known amongst the general public, and people with authority will be aware of how system dynamics can raise the effectiveness of the organisations they lead. Organisations will employ or seek support from large numbers of experienced professionals with deep skills that are defined, recognised and valued. Those professionals will emerge from Universities and other training institutions who provide high-quality training, drawing on an extensive resource of accessible and rigorous teaching materials. The topic will be understood and respected in the academic community. System dynamics will feature in all parts of the education system, leading to public understanding and demand for better policy-making throughout society.*



### 3. The state and progress of the field

Responses are summarised in two sections:

1. Information, issues and actions relating to specific domains in which System Dynamics is applied – the section of the field’s structure highlighted in Figure 2
2. Information, issues and actions relating to field-wide issues – the remainder of Figure 2

Numbers reported reflect the best judgement of the people consulted, not detailed research. Estimates varied widely, and some respondents were unable to provide all estimates. Nevertheless, the results reflect the best insights available and accessible at present.

Required actions are highlighted in purple, who might do them is highlighted in pink.

#### Application domains

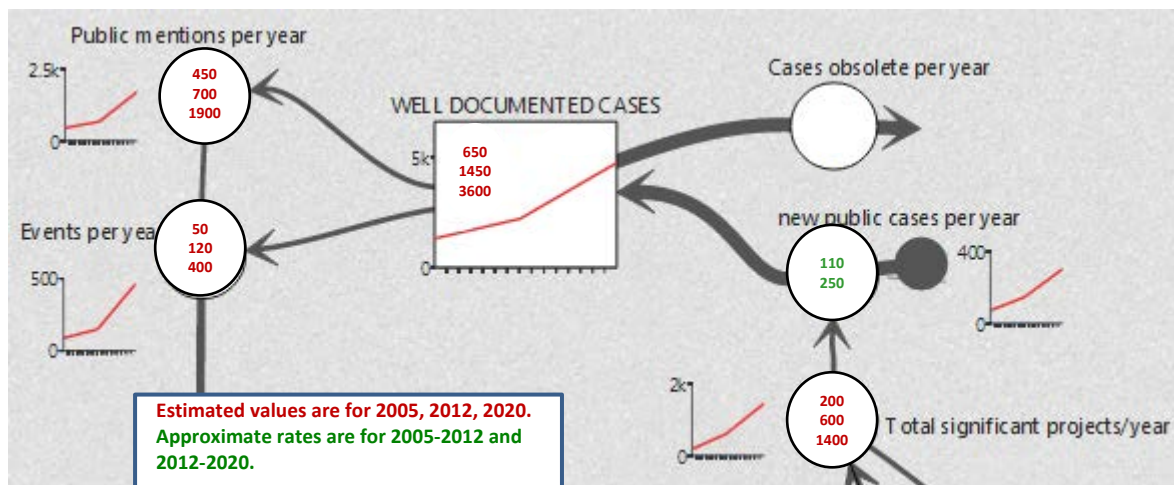
Analysis of the application domains is subdivided into three topics:

- the work done and knowledge in the domain
- users or clients for the work
- the practitioners

#### Work and publicity

Figure 4 summarises the rate at which projects are carried out, cases documented and publicity and events occur.

Figure 4: Work, cases and publicity in the application domains



Observations and issues:

- The number of significant projects being carried out looks plausible, and is consistent with the number of practitioners carrying out a very low average rate of SD projects – less than one per year (see below). This in turn is consistent with findings from Ken Cooper’s 2011 review of the SD consulting field.
- The number of well-documented cases appears very high, reflecting large numbers estimated for several domains (not skewed by 1-2 large estimates). It is likely that respondents gave views for the number of cases documented by those who commissioned or did the work, for their own purposes, not as was intended, the number of cases publicly available.
- The number of public mentions and SD-related events also appear high, but plausible.

Action-implications re SD work and publicity:

**Increase public documentation of successful cases from 130/year to 290/year by 2020 (practitioners)**, at least to the extent of summarising:

- the issue addressed, and its value or importance

- what was done, for whom and by whom
- the findings and resulting actions, decisions or policy-changes
- the value of the work (or other impact-indicator)

Note: refereed journal articles are a special and important sub-set of “documented cases”, but much shorter, simpler documents or presentations fulfil an important purpose also.

Increase substantially the participation of the Practitioner community in the wider activity of the field (SIGs)

Appoint VP Professional Practice for this purpose (PC)

Appoint a VP Marketing & Communications to lead efforts to raise public awareness of SD (PC)

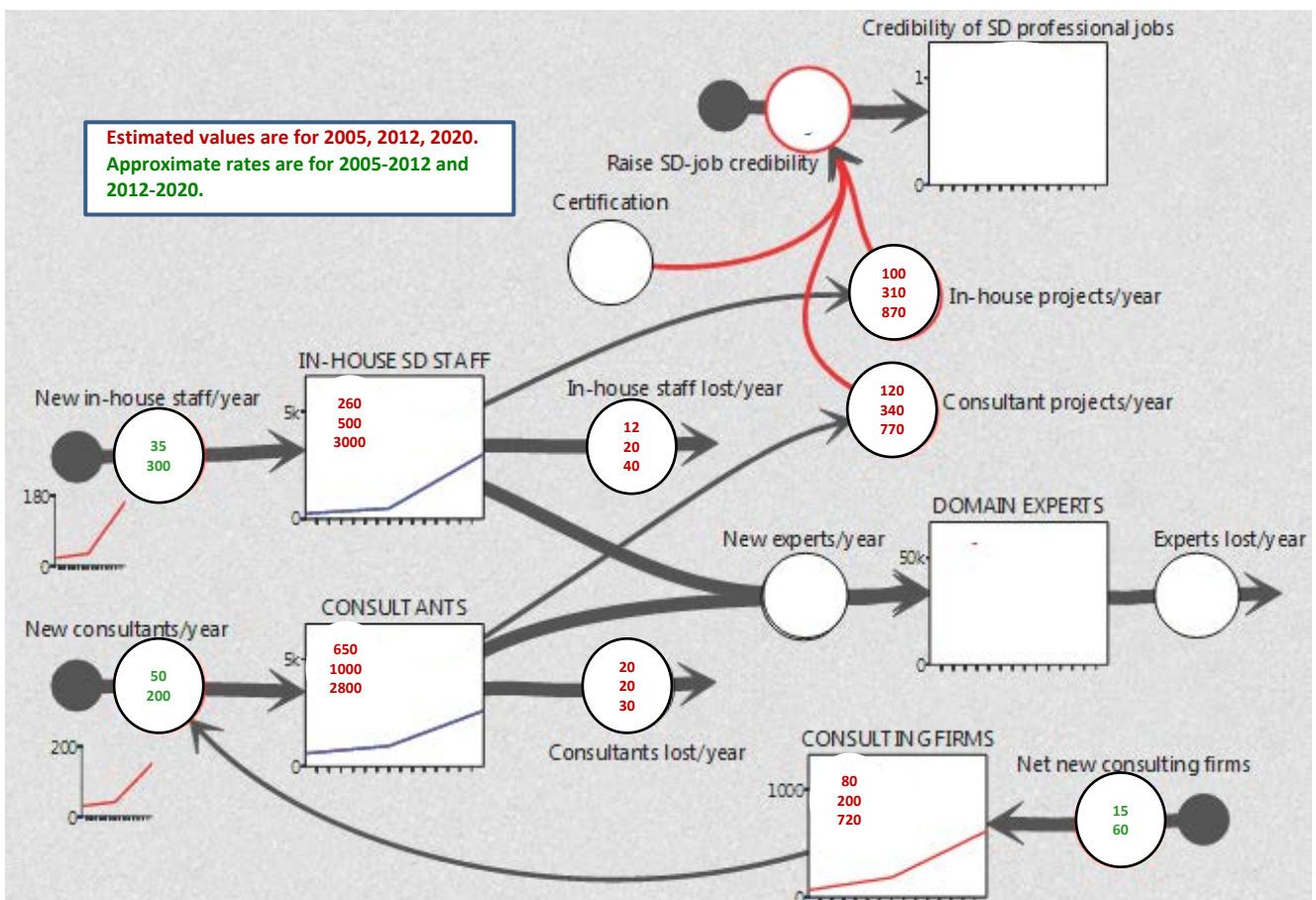
Increase public mentions of SD from 700/year to 1900/year by 2020, in diverse media (SIGs, chapters, VP Marketing, the Society Office).

Increase the number of events for users and practitioners from 120 to 400/year by 2020 (SIGs).

The SIGs play a critical role here, being the groups to which domain-practitioners relate. Geographic Chapters play a vital role in enabling local events. It is assumed that the Society would assist with publicity and promotion, if it could employ the services of communications professionals.

### Practitioners

Figure 5: Estimated numbers and targets for in-house and consultant SD practitioners.



Observations and issues:

- The number of consulting firms and consultants is consistent with Ken Cooper’s 2011 study, but the number of SD-skilled and active consultants is very small.
- The number of in-house SD-active staff is also very small.
- The number of new practitioners per year is consistent with the estimated stocks, and not only small, but a very small fraction of the estimated number of SD-skilled graduates (approaching 2000

per year) emerging from Universities. This is consistent with the very low rate of graduate engagement with SD-based jobs found in a 2008 Mannheim study.

- Respondents appear to have interpreted “domain experts” as meaning simply people who had worked in the field for some time, rather than – as intended – the small number of thought-leaders in each domain.

Action-implications re practitioners:

There are few direct action-levers available to any stakeholder group in the field to increase the rate at which the consultant or in-house practitioner communities grow. There appears to be very little recognition or credibility to SD-focused professional jobs.

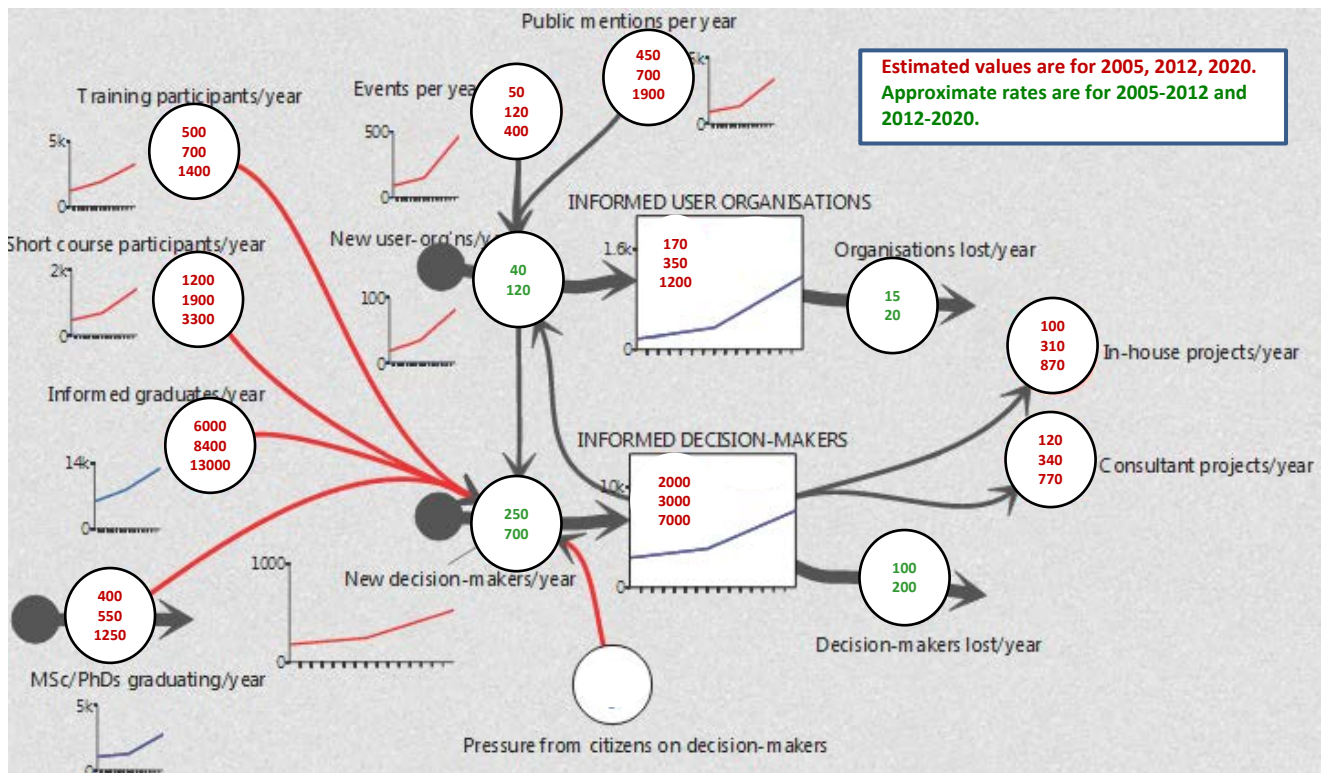
**A VP Professional Practice is needed, to lead efforts to define and disseminate good standards of practice in the field (PC).**

**The Society should assess the potential benefits of establishing a certification program to establish this credibility, and the feasibility of creating such a program (VP Professional Practice).**

Otherwise, growth in consultant and in-house practitioner communities is dependent on building demand (see below), in which area action will have to focus.

**Users and demand**

**Figure 6: Informed user organisations, decision-makers and demand**



**Observations and issues:**

- The numbers of SD-informed organisations and decision-makers are both minuscule, compared with the potential universe.
- The number of SD-based events and public mentions in media have both been small, and even when ramped up for the future are not expected to have substantial impact. However, it is possible that this leverage is badly under-stated – much greater impact has been achieved in other fields.
- The rate of increase in informed decision-makers should be boosted by flows of people through SD training, short courses, degree programs that include some SD, and SD-specialist graduates, but the very slow rate of conversion (which appears realistic) reflects
  - the small fraction of people who understand SD that reach decision-making levels

- the long lead-time, even if this occurs
- the 'forgetting' of SD during this process
- "Pressure from citizens" is a key feature of the strategic focus on K-12 education.

Action-implications re users and demand for SD:

Demand-growth is a key weakness in the field – across all application-domains, estimated numbers of informed people and organisations are insignificant, with the possible exception of healthcare and public policy in some geographies.

**A VP Marketing & Communications (or similar) should lead efforts to increase substantially the field's public visibility (PC)**

**It is vital to document and publicise successful SD interventions (SIGs, VP Marketing, Chapters, Society Office).**

**Substantial numbers of events are needed to inform decision-makers in all domains of SD's potential, including exploiting on-line facilities (SIGs, Chapters, VP Professional Practice, VP Marketing, academics)**

**Education of decision makers and potential decision makers needs to expand at all levels and in all sectors (in practice, universities and colleges, and pre-college). Support for those students after their initial training in system dynamics needs to be provided to maintain their impact as they progress to their decision making positions. (VP Professional Practice, Academics)**

## Cross-field issues

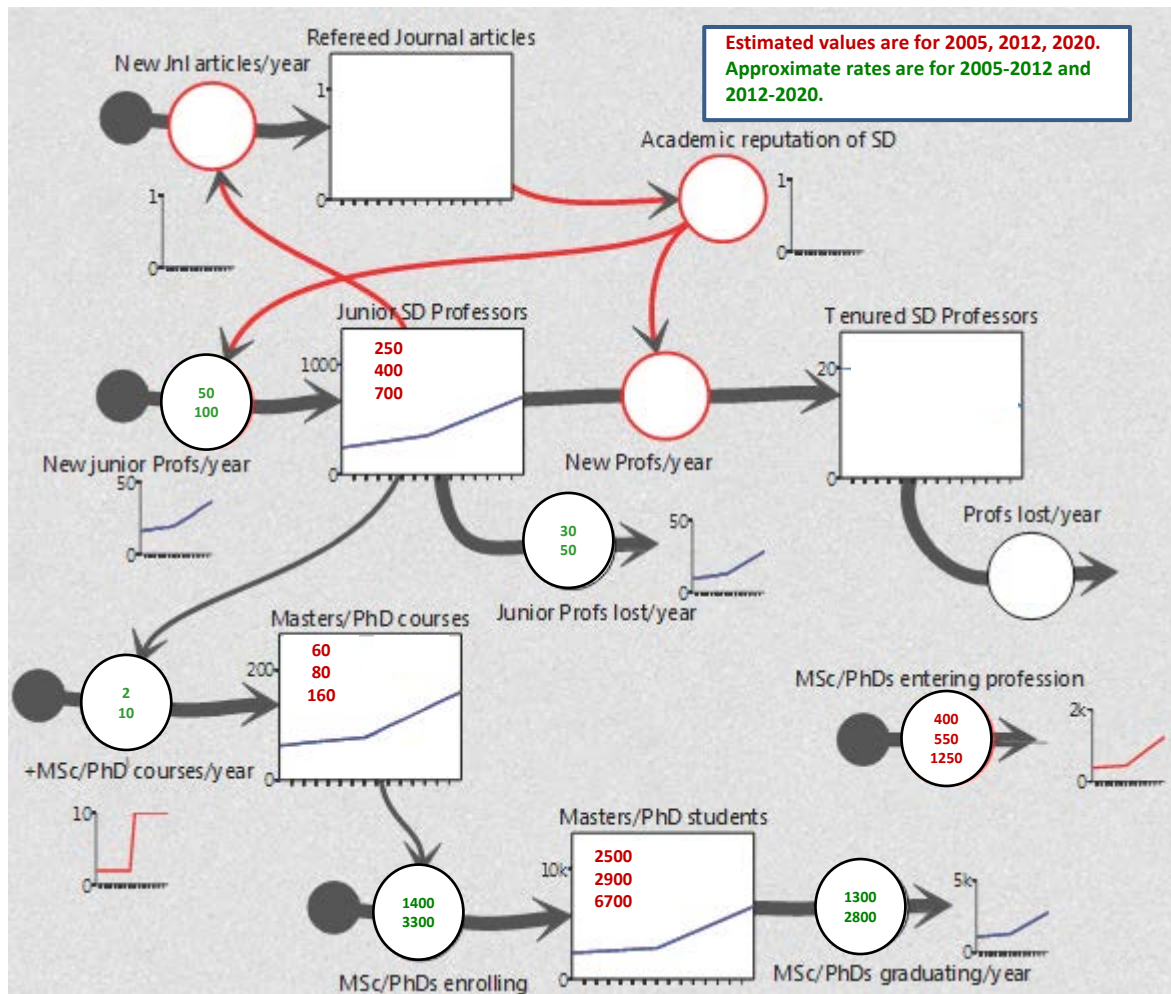
This section is organised in the following topics:

- University academics and degrees
- University and other adult training
- Pre-college (K-12) teaching
- The International System Dynamics Society

Two important aspects of the field have not received sufficient attention in the study – suppliers of software and other services, and the SD-based consulting firms.

## University academics and degrees

**Figure 7: Professors, degree programs and graduates** (Data on articles remains to be added, including SDR/other split. Tenured professor numbers to be added)



Observations and issues re University academics and degrees:

- Estimated numbers of Masters/PhD students in SD do not appear correct – supporting evidence is needed.
- The higher-education system is generating a strong number of top-end graduates each year, but few are believed to be entering the profession (getting jobs where they routinely use SD). Even this estimate is greater than is consistent with the estimated stock of practitioners (see earlier section).
- There may be additional numbers of 1<sup>st</sup>-degree graduates with significant SD skills missing from these data.
- Even with considerable effort, the launch of more courses will take a long time and only every reach limited numbers of students
- The number of SD-focused professors is modest, but strong growth is desired.
- There are inexorable forces at work in academia acting against the interests of the field.
  - “Publish or perish” is forcing academics to associate strongly with more recognised disciplines
  - ... and it is increasingly difficult for Tenured professors to be appointed on the basis of strong SD capability alone

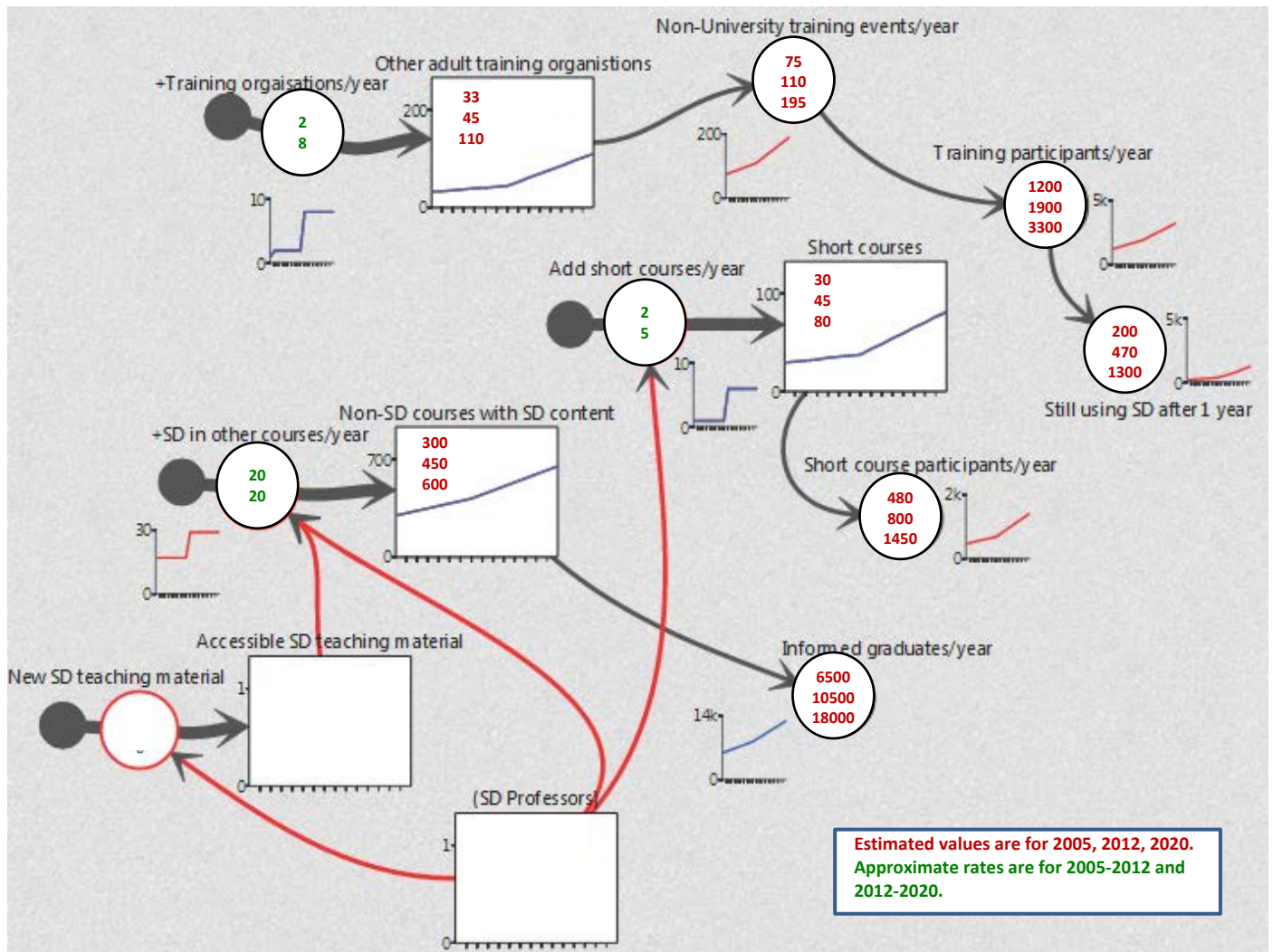
Action-implications re University academics and degrees:

These forces at work in the academic field raise the risk that neither the desired growth in professors, nor in degree-courses and graduates will be achievable.

**Develop more high quality online teaching resources, including whole courses, and promote them aggressively (SD academics)**

**The academic community urgently needs a strategy that offers the possibility of growing junior and tenured professor numbers, whilst raising their recognition and status relative to established disciplines (SD academics).**

**Figure 8: Adult training – University and other**



**Observations and issues re University and other adult training:**

- There is a significant rate of introductory adult training in SD, though insignificant in relation to the potential population.
- Even with considerable effort, the development of new face-to-face training will take a long time and only every reach limited numbers of people.
- Given this training rate, the field appears to be converting only a very small percentage to “informed decision-makers” (estimated stock of just 3,000). *This is especially remarkable, given sales of The Fifth Discipline estimated at >1million.*
- Very few of these trainees appear to develop into serious SD practitioners.

Action-implications re University and other adult training:

The poor conversion of SD adult trainees into practitioners and SD-informed decision-makers suggests that action needs to be taken to consolidate their skills, and to enhance the perceived value of those skills amongst their peers.

**Current adult training needs to be extended by supporting recent trainees in their efforts to apply SD and deploy the results of their work (SD-academics and trainers).**

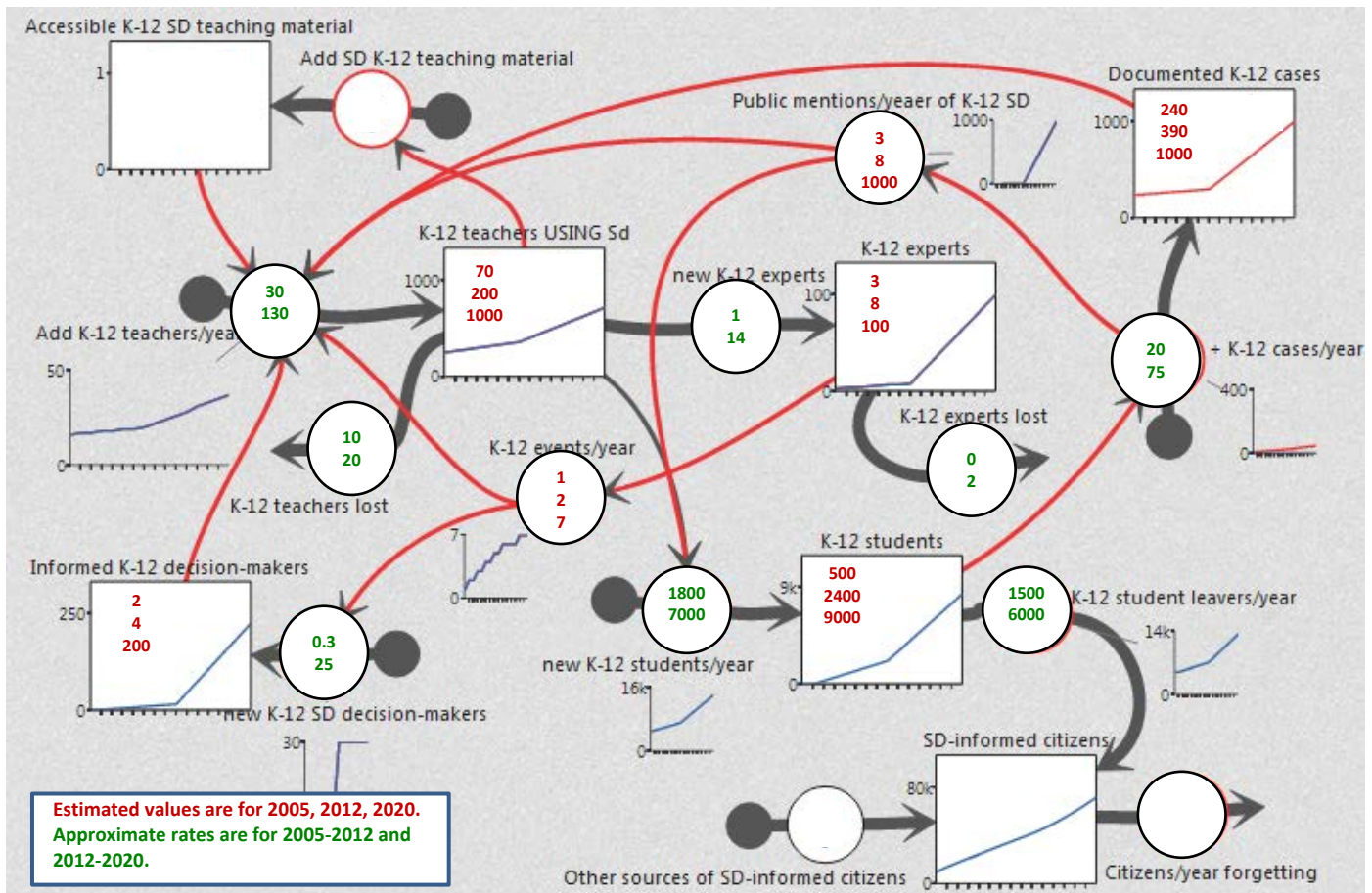
**Develop more high quality online teaching resources, including whole courses, and promote them aggressively (SD academics and trainers)**

**Considerable effort is needed to document and promote the results of good SD work (SD-academics and trainers + SIGs + conference organisers)**

**The Society** might assist with this effort, if it were able to resource strong marketing and promotion activity for SD work.

**K-12 Teaching and students**

**Figure 9: Pre-college teaching and students (K-12)**



The pre-college education segment causal structure is as follows:

- Teachers enroll students in classes, who then graduate and join the community of SD-informed citizens.
- Students generate case examples, that can feature in public mentions, and support additional pre-college education
- New K-12 SD teachers are brought in due to the support of informed decision-makers, public mentions and events, availability of good materials, and documented case examples.
- Experienced K-12 teachers become experts who can promote events and develop additional pre-college SD teachers.
- An additional feature not explicit in the diagram is the roll of other organisations, such as the Creative Learning Exchange and the Waters Foundation in providing resources and channels for pre-college (K-12) efforts.

Observations and issues re pre-college (K-12) education:

- The enthusiastic efforts to promote SD in K-12 education have made progress against dis-interest from informed decision-makers in the education establishment.
- Hoped-for progress is at a much more rapid rate than in the past.
- This progress is dependent on strong flows of new, engaging learning material, public mentions, public events, and conversion of decision-makers.

Action-implications re K-12 education:

**Considerable effort is needed to document and promote the results of good SD inputs in K-12 education, including a strong stream at the annual conference (SD-teachers)**

**This might be assisted by an equally considerable increase in the visibility of SD work done in the adult world (SIGs, Chapters)**

**Engage practitioners and higher-education professionals with K-12 leaders to generate powerful and engaging learning materials (Education and other SIGs, Academics)**

### **The International System Dynamics Society**

Implications for the Society itself follows on from the developments aspired to by the wider community.

Membership. The Society's membership is extremely small, both in comparison with other professional societies and with the likely population of people interested in the subject. Moreover, growth has been very slow and churn very high. Membership penetration is believed to be high amongst academics, but very low amongst practitioners and probably insignificant amongst users/clients.

This implies that potential members – especially practitioners – find little benefit from membership (*a conclusion supported by a brief inspection of those benefits*). A similar conclusion, probably to a lesser degree, can be drawn concerning pre-college educators. To make progress towards any of the aims supporting the community's Vision requires a substantial – perhaps orders-of-magnitude – increase in membership growth, and reduction in member turnover.

The Society would also benefit from a substantial Corporate membership (where “corporate” implies any type of organisation, not just businesses), both as a source of membership income and to reinforce access to individual practitioner-members.

**Identify and develop membership benefits likely to be valued by potential individual and corporate members (VP Membership + VP Practice)**

**Estimate the desired target number and profile of the Society's membership, both individual and corporate, and develop plans to achieve those targets (VP Membership + VP Practice)**

Cash. The Society has adequate cash reserves for its current and planned activities. However, any major effort to pursue the ambitious objectives noted in previous sections will require a substantial up-rating of its cash-flow. Options for achieving this include:



- Significantly larger membership numbers
- Greater participation at the annual conference, especially from user-organisations willing to pay for access to valuable content
- Building up a stock of products and services for sale
- Running more events, especially targeted at commercial clients

#### **Identify and develop additional sources of cash flow (VP Marketing, SIGs, Chapters)**

A more fundamental and potentially transformative option is to seek backing from external Foundations. This would not only boost the Society's resources, but also raise the public profile of the field. The most promising channel to pitch for such support may be through the SIGs, since that is where the Users, Practitioners and Knowledge all reside, along with (possibly) relationships with potential Foundations.

#### **Assess the options for raising Foundation funding for SIGs (SIGs)**

The SIGs. Much of the focus in this report lands on the application-domain SIGs, since (as explained) that is where the Users, Practitioners and Knowledge mostly reside. In other Societies, practice interest groups play a major role, including the running of conference streams and topic-focused conferences, engagement of user organisations and the steering of standards for professional practice. In some cases, such groups have a more substantial and formal status, sometimes termed 'Divisions' or similar.

In contrast, ISDS SIGs are low-key interest groups which mostly undertake limited activity and play a relatively minor role. This may in part reflect the limited practitioner membership in the Society. The existing SIGs also do not cover all of the main application-domains for SD, with notable omissions being Business and Public Policy. SIGs are also only loosely linked to the topic threads for the annual conference.

If the Society is to engage more practitioners and user/client organisations, SIGs need to play a more substantial leadership role.

#### **Increase the role, status and authority of SIGs, including greater responsibility for Conference Threads, if necessary changing the specification of their nature and activity (VP Membership, Org & Bylaws Committee)**

#### **Encourage the formation of new SIGs to achieve coverage of all significant SD application domains (VP Membership)**

The Chapters (geographic). The increased focus on the SIGs begs the question of what role the geographic Chapters play in the Strategy. Three substantial contributions may be needed:

- Facilitate local participation in domain-focused activities (in simple terms, make sure local Healthcare people know of and participate in international/online Healthcare activities, for example)
- Ensure that domain-focused work is strongly publicised in their locality (make sure great Healthcare SD work gets featured in local media).
- Encourage the translation of good quality content into local languages.

... in addition to their current role in networking amongst local SD practitioners, academics and students.

## **4. Initiatives and Actions to implement the Strategy**

### **Summary of Initiatives**

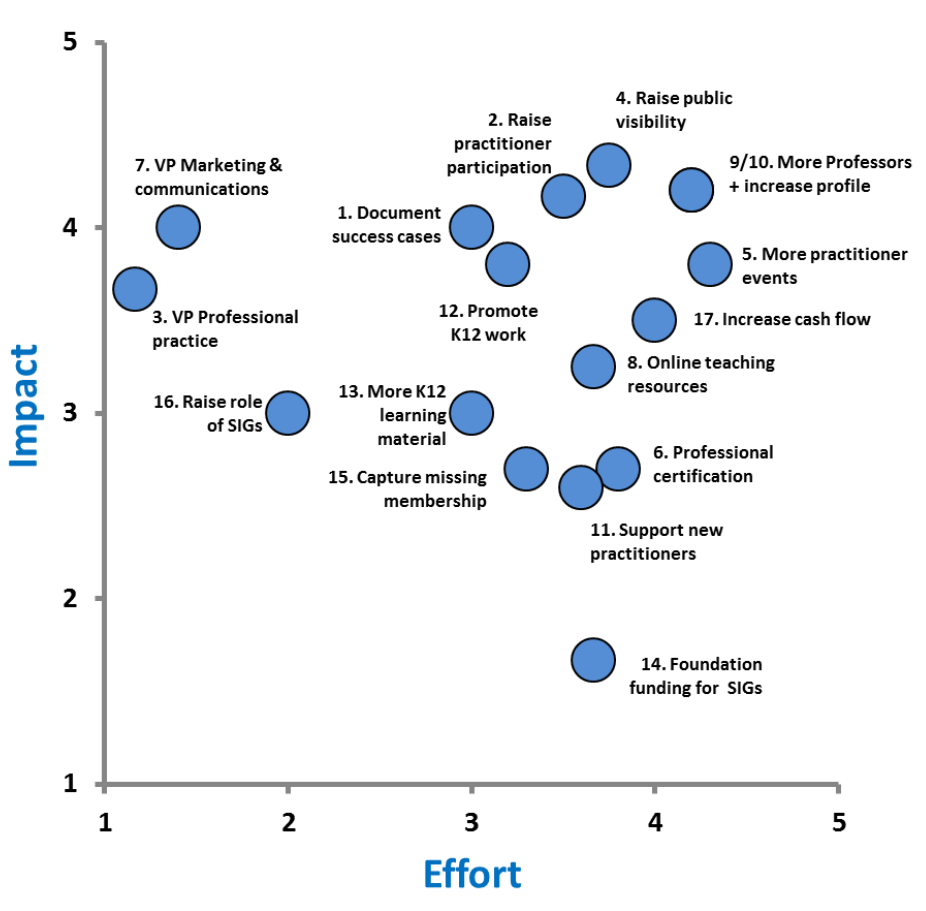
The Strategy Committee has summarised and evaluated the initiatives listed in previous sections, and their assessment is as shown in Figure 1 (repeated below).

Points to note:

- Acceptance of the strategy report **does not** imply approval of these Initiatives

- There are dependencies between initiatives. For example, appointment of VPs for Marketing and Practice may be necessary to enable certain other items.
- The items are not mutually exclusive and collectively exhaustive – there is overlap between some items and others may be missing.

Figure 1: Assessment of Effort and Impact for identified Initiatives.



### Action-options for implementing the Initiatives

The Strategy Committee has attempted to identify actions that may be necessary in order to pursue the Initiatives above. Points to note include:

- Acceptance of the strategy report **does not** imply approval of these actions
- The list of possible actions is not complete – additional suggestions are welcome
- Selection of, and support for, these actions will depend in many cases on the advice of certain VPs or Committees
- As a group of volunteers, any action will only be possible if individuals and groups are willing to pursue them, but it would be helpful if we could know which those items are.

Table 1: Action-options to implement the Strategy Initiatives.

| Initiative                                     | Action-options  | Led by ... |
|--|---|------------|
| 1. Document large numbers of successful cases. | <ul style="list-style-type: none"> <li>Short success cases on web-site</li> <li>Best-paper cases from conference</li> <li>Develop standard form for success cases [DONE]</li> <li>Establish high quality standards for success cases</li> <li>Start a practice-journal</li> </ul> | ???        |

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|--|--|
| 2. Increase practitioner participation in wider activity               | <p>Make conference program attractive to practitioners</p> <p>Practice-oriented conferences + events</p> <p>Seek support from s/w providers for practice-oriented events</p> <p>Advertise the existing practitioner award outside the SD community, to attract users</p>   |
| 3. Appoint VP Professional Practice                                    | Appoint VP Professional Practice   |
| 4. Considerable increase in visibility of SD work amongst the public.  | <p>Engage publicist/PR professional</p> <p>Set up marketing budget</p> <p>Create an annual award for best highly-visible SD work. Endow the award and provide cash award.</p>  |
| 5. Deliver events for users, decision-makers and practitioners.        | <p>VP Membership encourage SIGs to run events</p> <p>Establish means for online conferences</p> <p>Set up online conference facilities for Society</p>   |
| 6. Assess the benefits of a certification program.                     | <p>VP Practice to carry out this assessment</p> <p>Start by surveying members</p> <p>List pros and cons</p>  |
| 7. Appoint VP Marketing and Communications.                            | Appoint VP Marketing   |
| 8. Develop and distribute more high quality online teaching resources. | Aggregate and evaluate information on existing resources. Develop a strategy for expansion of resources and their delivery and use.  |
| 9. More junior and tenured professors                                  | Develop and implement a strategy for supporting tenure track faculty working in system dynamics  |
| 10. Increase the visibility of SD work on other academic fields.       | <p>Encourage and support academics to participate in domain-specific conferences</p> <p>Encourage and support academics to publish in domain-specific journals</p> <p>Develop and implement a strategy to raise awareness of the value of system dynamics within organizations based on established disciplines (e.g. academic departments, internal business consulting operations)</p> |

|   |   |
|---|---|
| 11. Support recent adult trainees in applying SD.                         | Encourage course providers to offer this service  |
|   | Develop and support one or more sub-communities of novice SD people (perhaps a “Novice Modelers” SIG) |
| 12. Document and promote good SD results in pre-college (K-12) education. | Set up strong focused K-12 stream at conference   |
|   | Seek Foundation funding for travel/attendance   |
| 13. Increase in engaging pre-college (K-12) learning material             | Pair up K-12 educators with practitioners to develop exercises  |
|   | Pair up K-12 educators with higher-ed academics to develop exercises                                  |
| 14. Raise Foundation funding for SIGs.                                    | Approach foundations to investigate potential and means   |
| 15. Identify and capture desired number and make-up of Membership         | Seek s/w providers assistance in estimating non-member numbers  |
|   | Seek s/w providers assistance in estimating corporate SD numbers                                      |
|   | Develop member benefits likely to appeal to practitioners   |
| 16. Increase the role of SIGs in the Society                              | Revise role-definitions of SIGs   |
|   | Identify missing SIG domains and encourage their formation  |
|   | Tie SIGs to conference threads more closely   |
| 17. Increase Society cash flow  | Identify and offer potential products and services  |
|   | Offer more events, including online [maybe via SIGs]  |
|   | Charge for Web attendance at conference   |