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Abstract	<p>e-Government is now a worldwide and complex phenomenon. A dominant view of how it should be evaluated focuses on assessing both e-government evolution and use. Questions about the purposes and contributions of e-government to societal improvement are being excluded from the evaluation. In this chapter a case study of Colombia is used to gain insights into the challenges faced by evaluators. With these insights and using systems thinking as a body of knowledge, three (3) conceptual patterns of practice are defined to help stakeholders engage with evaluation activities and positively improve the influence of e-government in society.</p>	

Chapter 2 1
Systemic Patterns of Practice to Improve 2
e-Government Evaluation 3

José-Rodrigo Córdoba 4

Abstract e-Government is now a worldwide and complex phenomenon. A dominant view of how it should be evaluated focuses on assessing both e-government evolution and use. Questions about the purposes and contributions of e-government to societal improvement are being excluded from the evaluation. In this chapter a case study of Colombia is used to gain insights into the challenges faced by evaluators. With these insights and using systems thinking as a body of knowledge, three (3) conceptual patterns of practice are defined to help stakeholders engage with evaluation activities and positively improve the influence of e-government in society. 5
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2.1 Introduction 13

The phenomenon of e-government (electronic government) spreads rapidly and worldwide. Whilst for many governments the primary focus of e-government is to achieve efficiency in terms of economies of scale and communication, they find it difficult to assess the social and political impacts of e-government systems. This chapter argues that this difficulty lies partly in the use of traditional models for e-government (ex post) evaluation (measurement). Such models make the assumption that in order to achieve efficiency, different stages of *evolution* and *diffusion* of e-government have to be completed first. Softer aspects and alternative views of efficiency as perceived by stakeholders are being left-out from evaluation. With such a narrow focus, e-government could be contributing to transform the public sphere of societies into an electronic market of products and services exclusive for those who can afford them and thus converting citizens into passive consumers 14
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26 (Ciborra 2005; Mattelart 2003). A key question therefore that this chapter addresses
27 is: How can e-government evaluation be more comprehensive and inclusive?

28 This chapter proposes a number of *conceptual patterns* to enhance critical reflection
29 in e-government evaluation from the perspective of different stakeholders. The
30 word pattern is used here to exemplify an ideal situation in which different stakeholders
31 jointly evaluate and act on the implementation of e-government systems. The definition
32 of patterns is inspired in the ideas of applied systems thinking (Jackson 2003; Midgley 2000)
33 and more concretely in a programme of research to support information systems activities
34 with systems thinking ideas and methodologies (Córdoba 2009).
35

36 Although the proposed patterns are conceptual in nature, their definition draws
37 on insights from a case study of an e-government evaluation approach that is currently
38 used by the government of Colombia (GovLinea 2009; Rodríguez and Cusba 2011).
39 Colombia is regarded as a best practice case of e-government in South America (Parra 2011)
40 and elsewhere (Ndou 2004). The case study involved a review of relevant policy documents,
41 evaluation reports and three interviews with members of the Colombian e-government
42 programme (technical director and two people responsible for evaluation). The idea was
43 to elicit some key challenges which could then be interpreted in the light of relevant theory
44 and suggest future improvements for practice (Walsham 1995). From the insights of the case
45 study and using systems thinking as a conceptual lens, the proposed patterns can enable
46 e-government users, administrators and technology experts work together to improve
47 evaluation practice and the contribution of e-government to societal improvements.
48

49 The chapter is organised as follows: A context for e-government is set with a
50 view of it as a complex phenomenon and in need of enriching its evaluation. Key
51 challenges for e-government evaluation are identified through the case study of
52 Colombia. With systems thinking as a conceptual lens, three (3) patterns to improve
53 evaluation are proposed to address these challenges. Some implications for
54 e-government evaluation practice and policy are drawn in the concluding section.

55 2.2 e-Government and Its Evaluation

56 There is no single or agreed definition of the phenomenon of e-government. Instead,
57 there are several definitions to account for different manifestations of this phenomenon
58 (Heeks and Bailur 2007; Henman 2010; Marche and McNiven 2003; United Nations 2010).
59 To some people, e-government involves the use of information and communication
60 technologies in public administration. To others, it is the use of systems and technologies
61 to transform relationships between government organisations and citizens, including
62 electing and communicating with government representatives. The different manifestations
63 of e-government include e-procurement, e-marketing, e-management, e-service provision
64 and e-democracy (Henman 2010). In all these manifestations, e-government is conceived
65 of as a vehicle to enable countries to *move* from a purely operational or transactional
66 nature towards states of governance, where transparency, public accountability and
67 participation become

attributes or measures of such governance (Calista and Melitsky 2007; Marche and McNiven 2003).

The variety of definitions and scope offered to e-government (local, regional or national) reinforce the view that this phenomenon is complex and therefore difficult to evaluate (Irani et al. 2008). An early paper by Gupta and Jana (2003) suggests that the degree of complexity of e-government evaluation arises due to the different dimensions or aspects that governments want to evaluate. These could be economic, political or social (Chircu 2008) in order to account for a variety of benefits and costs. In addition, gathering relevant data for evaluation according to Gupta and Jana requires the use of different estimation methods and techniques: 'Hard' ones can be used to quantify costs and benefits, whereas 'soft' ones aim to gather ideas about values and impacts of e-government systems from the perspective of users and those individuals managing or operating them (Gupta and Jana 2003).

Despite a declared degree of complexity in e-government and a number of evaluation approaches being available from the information systems literature (Farbey et al. 1999; Irani and Love 2001), what seems to predominate in practice is the use of one or two types of evaluation models. These are *evolution based and service quality based*.

Evolution-based models of evaluation aim to assess the degree of implementation achieved in the different stages of e-government evolution. Models assume that e-government evolves through stages of information, interaction, transaction, integration (vertical and horizontal), transformation and ultimately a stage of e-governance (Andersen and Henriksen 2006; Layne and Lee 2001). Government organisations and those individuals who are responsible for implementing e-government services should assess their progress in implementing services and thus moving from one stage to another. The outcome of evaluation is a summative assessment of the degree of completion of e-government plans and projects and a cost/benefit analysis at each stage. Aspects that are assessed include financial (cost avoidance, cost efficiencies, increase in service levels or quality), social (dissemination of information, public value creation, improved resource allocation) and political (enablement of democracy, transparency, accountability, social justice or liberty) (Chircu 2008; Grimsley and Meehan 2007; Papadomichelaki and Mentzas 2012). Although the opinion of citizens is an essential input for this type of evaluation models, the focus is on determining the degree of achievement of government goals.

Service-quality-based models gauge the users' degree of satisfaction with services and their current or future intention to use them (Alshawi and Alalwany 2009; Connolly et al. 2010; Papadomichelaki and Mentzas 2012; Verdegem and Verleye 2009). Focus of evaluation is on identifying features of e-government systems as presented through websites, portals and other channels which work or which do not work for users. Evaluation models consist of a series of variables related in cause-effect (hypothesis) form so that users' intention of e-government service use is the by product of different aspects including service friendliness, ease of use of systems, speed and security of transactions, protection of personal information and degree of control over the service (Gilbert et al. 2004; Grimsley and Meehan 2007). The outcome of evaluation is an identification of several aspects (technical, procedural and organisational) which need attention in order to improve satisfaction and hence service use.

114 Underpinning the above two types of evaluation of e-government, there are
115 unquestioned assumptions: (1) Efficiency in e-government is about achieving econ-
116 omies of scale by streamlining government activities which in turn will make com-
117 munications between governments and their constituencies faster, friendly, reliable
118 and cost effective and (2) all e-government stakeholders agree with this view on
119 efficiency because it is deemed as 'citizen centred' (in other words it is assumed that
120 this is what citizens want) (Holmes 2001).

121 Both of these assumptions contribute to generate a limiting and passive attitude of
122 stakeholders towards e-government, that of mere consumers of services. They need
123 to be challenged in e-government evaluation by enabling stakeholders to express
124 their concerns so that they can also define how information systems and technologies
125 can contribute to improve their quality of life in society (Córdoba 2009).

126 These assumptions have been considered in the literature. Although examples of
127 participative stakeholder evaluation have been proposed in the literature of informa-
128 tion systems (Remenyi and Sherwood-Smith 1999; Walsham 1999) and
129 e-government (Grimsley and Meehan 2007; Irani et al. 2008), the resulting evalua-
130 tion approaches seem to subordinate evaluation to successful e-government imple-
131 mentation and thus to economic efficiency. Furthermore, little is provided in the
132 form of practical tools to evaluation stakeholders so they can do the evaluation
133 themselves. This chapter aims to contribute to address these shortcomings by draw-
134 ing on the insights obtained from a case study on e-government evaluation in
135 Colombia and using systems thinking to conceptualise practical ways to improve
136 evaluation practice. In the next section, the case study is presented.

137 2.3 A Case Study: Colombia's e-Government 138 Evaluation Model

139 In the practice of e-government evaluation, many governments use a combination of
140 both of the models presented above (Gupta and Jana 2003), and they also incorpo-
141 rate project management techniques to assess and act on the degree of completion
142 of their plans. What follows is a brief presentation of a case study of an e-government
143 evaluation programme in Colombia, a country which is regarded as best practice in
144 South America given the growth in the number of e-government services being
145 provided in the last few years and the rankings obtained in the United Nations index
146 of e-government (Parra 2011). The case presented involved review of key policy
147 documents (ColombiaDigital 2006; GovLinea 2009; Mincomunicaciones 2007;
148 Vision-2019 2005), evaluation reports (GovLinea 2011) and interviews with the
149 technical director and evaluators of the programme in the period between 2007
150 and 2011 (Rodriguez and Cusba 2011; Sin 2007). Permission was granted to use
151 material from interviews and documents.

152 To date, the Colombian government has developed an evaluation model that aims
153 to assess progress in the achievement of different objectives related to *both* the
154 implementation of electronic government services and their use by citizens and

2 Systemic Patterns of Practice to Improve e-Government Evaluation

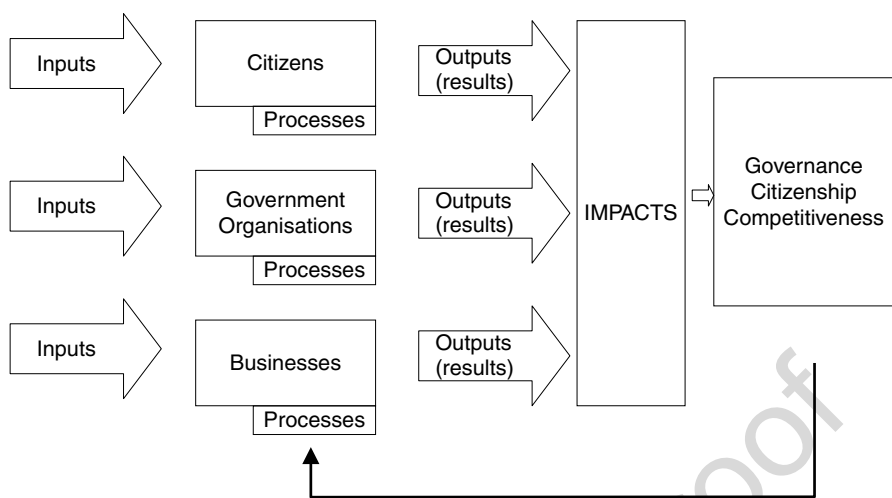


Fig. 2.1 Colombian e-government evaluation model (GovLinea 2009)

businesses (GovLinea 2009; Rodriguez and Cusba 2011). As seen in the figure below, the model gathers data to assess progress in three (3) main areas: governance, citizenship and competitiveness. Governance refers to efficiency in the delivery of e-government services in seamless, comprehensive and transparent ways. Citizenship relates to the enabling of dialogue, democratic decision-making and accountability through the use and delivery of such services. Competitiveness means an increase in productivity and opportunities for growth for both government organisations and businesses via e-government services (GovLinea 2009; Rodriguez and Cusba 2011) (Fig. 2.1).

[AU1]

There are three main user groups involved in e-government evaluation, *citizens, businesses and government organisations*, for which evaluation has a number of **components**: inputs, processes, outputs and impacts. As the figure above shows, processes require certain **inputs** to run and will generate certain **outputs or results** which in turn can be used to assess different **impacts** (including benefits) of e-government in governance, citizenship and competitiveness.

Each of the components of the model (inputs, processes, outputs and impacts) has associated a number of **attributes** (adjectives) and **aspects** which in turn have **indicators**. Indicators are measured via **variables** for which data (quantitative, qualitative) is collected from the main user groups. For government organisations, data is collected via questionnaires from interviews and by also examining each organisation's website or portal. For both citizens and businesses, data for variables is collected in the form of questionnaires¹.

¹ According to Colombian e-government evaluators, for businesses two evaluation interviews are conducted: one with the legal representative and another with the person in charge of using an e-government service.

177 The results of the model are calculations performed in the data from variables
178 and grouped according to each of the model's components. Results obtained
179 between 2008 and 2011 (GovLinea 2011) indicate that overall, many government
180 organisations are reasonably on target to implement their e-government services
181 and meet most of the expected transformation stages expected (publication, transac-
182 tion, interaction) although an initial goal was to have 100 % of e-government
183 services implemented by 2010 (GovLinea 2009). Results show that citizens
184 and businesses perceive that e-government services offer them up-to-date and
185 accurate information in a very friendly way and that there are important savings in
186 cost and time being obtained (GovLinea 2011). Evaluation reports recommend
187 government institutions at different levels (national, regional, local) to continue
188 working to make their internal processes to become more interoperable, transparent
189 and efficient.

190 *2.3.1 Challenges to Improve Evaluation*

191 The above model combines elements of evolution and service quality types of eval-
192 uation. On the one hand, it enables the Colombian government to have an overall
193 view of how e-government plans are progressing in each government organisation.
194 On the other, it gathers citizens and government officers' perceptions about their
195 satisfaction with the e-government services provided. However, there is still room
196 for improvement. The following challenges were identified when interviewing
197 Colombian evaluators (people responsible for administering the evaluation) and
198 asking them about their future plans (Rodriguez and Cusba 2011; Rodriguez 2011,
199 2012). In this section these challenges are highlighted and related to the broader
200 literature on e-government and its evaluation.

201 First, there is a challenge to quantify different types of data to feed into the evalu-
202 ation model. As e-government evaluators in Colombia say,

203 We can talk about governability, governance...do I trust more in the government, do we
204 trust more in my institutions?...the other terms [competitiveness, efficiency] could be eas-
205 ier to define...the difficulty is to gather information [evaluation], the baseline, then do the
206 follow up...so far we have got good results, but now we want to transit from perception to
207 [hard] data, so that in the medium term we can measure the real impact of e-government...
208 from all groups' perspectives [citizens, businesses, government organizations]...from the
209 offer and the demand sides of e-government. (brackets added) (excerpt from interview)
210 (Rodriguez and Cusba 2011)

211 For Gupta and Jana (2003), there are many aspects for which quantitative infor-
212 mation is not available, and therefore they are excluded from ~~e-government~~ evalua-
213 tion. A degree of subjectivity is inevitable when it has to be decided by someone in
214 government *what* impacts are to be measured and *how* these relate to perceived
215 benefits by e-government users (including government organisations themselves).
216 Subjectivity is also reflected when users of e-government have to 'rate' their satis-
217 faction with the provision of e-government services.

2 Systemic Patterns of Practice to Improve e-Government Evaluation

A second challenge arises when government organisations intend to use the results of evaluation models to influence future action. It becomes difficult to know why exactly e-government has delivered a particular benefit or impact, and therefore it is not easy to decide where action needs to be taken or rewarded in government (Gupta and Jana 2003, p 369). Excessive concern with performance measurement can leave little room to the management of such performance (Northcott and Taulapapa 2012). According to Colombian evaluators,

To date, we have not been fully judicious in feeding back [evaluation results] to [all] actors...we simply upload the results...we do not often provide feedback neither do we sit with organizations because we do not have the capacity to sit with all [government] organizations and encourage them to evaluate themselves. (brackets added) (excerpt from interview) (Rodriguez and Cusba 2011)

In order to address the above challenges, this chapter proposes that e-government evaluation should be considered a system that is part of a wider system (Ackoff 1981) and whose activities will also have implications for and will be affected by other domains of activity within government and beyond. With this consideration in mind, there is the possibility for stakeholders to co-define what they want from e-government, how they consider best to achieve e-government efficiency and how to evaluate it. By using systems thinking as a conceptual lens, several possibilities to improve evaluation can be developed which include:

- e-Government can be considered a socio-technical system so that different perspectives of stakeholders can be elicited and considered in systems design and maintenance (Olphert and Damoradan 2007).
- Evaluation processes can then support the search for different purposes associated to e-government by those designing, managing or using e-government services (Checkland and Poulter 2006).
- Purposes and ways to evaluate efficiency can be continuously defined and revisited with a view to consider what really works and why (Chapman 2002). This includes discussions about what counts as evaluation data as well as how data is to be collected (Midgley 2000).

To take these possibilities forward, the ideas of Córdoba on patterns of systems practice are explored now (Córdoba 2009). According to Córdoba, a *pattern* reflects a commonly accepted way of working by different stakeholders in the pursuit of societal improvements. He defines three patterns to capture ways of using systems ideas and methodologies in dealing with complex information systems problems. With patterns, those people in charge of planning or evaluating information systems can decide what is relevant to address in a particular situation and employ systems thinking ideas accordingly.

Patterns described are possible scenarios of dialogue and participation of stakeholders. Under each of the patterns proposed, there are specific activities involving critical reflection as well as systems methodology use as follows:

- The first and most common pattern is an *idealist* one. Within this pattern people focus on generating or adopting a *transformative vision* of a future organisation

- 261 or a situation and define the role of information systems and technologies to
262 implement the vision. The use of systems thinking and methodologies within this
263 pattern consists of enabling stakeholders to define a vision or to make it opera-
264 tional to their level of work in the form of concrete action plans as well as mecha-
265 nisms to evaluate progress in making the vision happen.
- 266 • A second pattern of systems practice is called *strategic*. This pattern highlights a
267 focus on *shaping* the use of systems and technologies according to people's val-
268 ues, concerns and aspirations. Engagement, participation, dialogue and debate
269 are key activities. Systems methodology use aims to support interactive design of
270 actions for improvement of a situation ~~which would require~~ their continuous
271 evaluation through provision of information.
 - 272 • A third pattern considers that the use of systems and technologies in organisa-
273 tions and society has a degree of unpredictability ~~because of power relations~~;
274 therefore, people can use them for their own ethical purposes. Ethical reflection
275 should be about **who we want to become** in the light of constraints and possibili-
276 ties generated by power relations and **how we can use** available systems and
277 technologies to become **who we want to become** as individuals or groups.

278 The choice of a dominant pattern to follow obeys what is relevant as well as what
279 is feasible to do in a situation. In some cases there might be willingness and com-
280 mitment to generate transformative vision or a need to firm up a vision under which
281 a radical use of systems and technologies should be achieved. In other cases and
282 once organisations have some information systems plans in place, it might be more
283 feasible to facilitate dialogue and exploration. Or in other cases the situation appears
284 as complex, with many conflicts of interest at hand as well as divergent perspectives
285 on what should be done.

286 Using the above ideas on systems thinking and patterns of practice, the chapter
287 now proceeds to propose three evaluation patterns which could then help people
288 involved and affected by e-government evaluation improve their evaluation activi-
289 ties. The aim is not to replace but rather complement the use of existing evaluation
290 models by facilitating participation and critical reflection for the benefit of
291 e-government stakeholders and societies in general.

292 2.4 Idealist Pattern for e-Government Evaluation

293 Under this pattern, the aim of evaluation is to define a vision of how e-government
294 is to improve life in society for individuals. The achievement of a vision requires
295 meeting a number of preconditions in terms of the technological infrastructure that
296 is needed to provide e-government services. These preconditions are to be validated
297 in relation to their feasibility as well as to how they contribute to generate a support-
298 ing operational environment to advance towards the desired vision.

299 What this pattern suggests is a continuous and comprehensive planning and
300 review of e-government so that its evaluation becomes an integrated effort to its
301 development. In other words, evaluation is the overall feedback component of the

e-government system (Irani et al. 2008). This also means that there is continuous and participative learning about e-government and its desired impacts within and beyond government organisations. Learning to see what works and what does not becomes essential.

The pattern offers evaluation stakeholders an opportunity to ‘start from scratch’ and define the vision of an ideal system of e-government *within* an ideal system of society. A future society should cater for the needs and concerns of present and new generations. In such a society, existing problems of the present time are not only solved or resolved but dissolved (Ackoff 1981).

Under this pattern evaluation stakeholders can then define or review the purposes attributed to e-government systems and how the intended efficiencies serve societal improvements in a future society. In this way they can also redefine the purpose and activities of evaluation so that existing evaluation models can be reviewed. The following questions could help evaluators and other stakeholders engage in creative thinking about e-government and its evaluation:

2.4.1 General Questions to Formulate a Vision 317

- What sort of society do we want in the future? How does this vision meet the needs and aspirations of different stakeholders? 318
- What transformations are required to move forward? Are these transformations desirable? 319
- What e-government infrastructure and services are to be provided to achieve desired transformations? 320

2.4.2 Specific Questions to (Re)define the Evaluation of e-Government 324

- How can progress to implement the stated vision and transformations be monitored in terms of objectives or critical success factors? What indicators are needed? 326
- What data is required for their evaluation? How can this data be obtained from existing evaluation models? 327
- How can the vision be refined or modified periodically? Who should be involved? 328

The set of evaluation indicators to assess progress towards achieving the stated vision can also be designed as part of a ‘viable system’ in terms of the information that it can provide to different government managerial levels to help them deal with complexity at each level (Beer 1985). In each level, the evaluation system would contribute to assess the achievement of that level’s purpose in relation to a vision by providing information and opportunities for communication with that level’s environment (local, regional, national) (Espinosa and Maimani 2010).

339 **2.5 Strategic Pattern for e-Government Evaluation**

340 In cases where 'free thinking' to formulate a desired vision of society and
341 e-government cannot take place or is difficult to be achieved, an alternative and
342 complementary pattern of practice would focus on learning about how people can
343 make best use of existing e-government services. This pattern privileges an interpre-
344 tive evaluation type of evaluation in which different concerns, issues and claims
345 about provision of services can be surfaced or raised by stakeholders (Guba and
346 Lincoln 1989).

347 A strategic pattern facilitates dialogue and mutual understanding. There could be
348 a variety of purposes attributed to e-government by stakeholders. Therefore, it
349 becomes necessary to enable stakeholders to elicit their perceptions about the role(s)
350 that e-government and its services are currently playing to address people's
351 concerns, values and aspirations. In line with this, e-government systems would then
352 provide information to support meaningful and purposeful activities of stakeholders
353 (Checkland and Holwell 1998; Wilson 2002). This information can be then com-
354 pared with the information provided by existing evaluation models or approaches.
355 Suggestions to improve both e-government services and the information they pro-
356 vide can be drawn to inform future policies and plans.

357 The following questions are inspired in the idea of an information system as a
358 supporting system of organisational action (Checkland and Holwell 1998; Wilson
359 2002) and can help e-government stakeholders elicit their perceptions about the
360 support they receive from e-government services:

- 361 • How does e-government currently or potentially help you take purposeful action?
- 362 • What changes in existing e-government services and what new services are
363 required to provide adequate support to action?
- 364 • What information is required to assess this support?
- 365 • How can this information be obtained through current or new evaluation models
366 or activities?
- 367 • How can new or emergent purposes be included in evaluation?

368 These questions could work best when stakeholders consider that there are genu-
369 ine and noncoercive opportunities for dialogue and participation. Stakeholders
370 should be able to feel at ease and share as well as represent their perceptions. In situ-
371 ations where people do not feel safe expressing themselves other methods (i.e.
372 observations, confidential interviews) should be used.

373 Answers to the above questions would help people administering evaluation
374 activities (evaluators) to consider developing *systemic changes* to improve
375 e-government evaluation. An example of a systemic change is the following: A sug-
376 gestion to improve the computer interface of an e-government service (i.e. pay a
377 single tax with a single click) is linked to an improvement in the underlying process,
378 to a change in the law and even to a friendlier use of this service by both providers
379 and users, all of which can generate a climate of mutual trust and learning. This type
380 of change results from considering what is meaningful to people in a situation as

well as defining agendas for action that cover technical, organisational and cultural aspects (Checkland 1981). Under this pattern of practice, stakeholders should aim to propose systemic changes through e-government evaluation as a way to ensure that e-government systems serve different audiences within and beyond government.

2.6 Power-Based Pattern of Evaluation

In many societies the issue of stakeholder participation for evaluation of government plans and policies is contentious, as there are stakeholder groups (including government itself) who have greater influence than others in setting the agenda; this is also the case of e-government (Chircu 2008). Whilst governments often pride themselves in making their activities more efficient, transparent or accountable via e-government services, citizens and other stakeholder groups have divergent or opposing views about what has really been achieved. For instance, the processing of online welfare benefits might be regarded as a success in efficiency according to official government indicators, whereas it can be seen as a sign of exclusion or marginalisation by elderly or non-technology literate people.

Concerns of powerless stakeholders could remain invisible if they are not publicly acknowledged *and* addressed via policies or plans (Midgley 1992). Governments could find it challenging to acknowledge a diversity of views through their official channels (i.e. government websites or portals). They could also find it difficult to effectively use stakeholder participation, in particular, when using traditional models of e-government evaluation. As expressed by Colombian evaluators,

A citizen [stakeholder] who actively takes part [in contributing with ideas in the e-government evaluation process] wants to know if his/her participation had an effect ...the perception is that citizens' [online] comments are not taken into account...the more [and visible] feedback a citizen receives the more motivated s/he gets to continue participating.... (brackets added) (excerpt from interview) (Rodriguez and Cusba 2011)

This is not only a difficulty experienced in Colombia but elsewhere, where stakeholders do not see how their participation influences e-government evaluation (Irani et al. 2005) and they can feel marginalised. Masked as a form of freedom, involvement of people in e-government consultations or surveys becomes a constraint for them to do 'otherwise' than they are asked to (Foucault 1982, 1984). People become subjects of power; in other words, they become subjected to a particular way of evaluating that forces them to behave and act as prescribed.

However, this link between people and evaluation can (and should) be continuously *broken*. A power-based pattern of e-government encourages stakeholders to make use of available systems and technologies (including existing e-government systems and evaluation methods) to continuously analyse and redefine who they want to become according to their own ethics. Stakeholder groups can *also* use social media (blogs, forums, messaging) to respond to government decisions and policies or deliberate about/contribute to generate new ideas which are more attuned to what

421 they want (Petruzzo and Palm 2009). Both individuals and groups can exert pressure
422 at different levels by mobilising, contributing to or influencing public opinion.

423 This pattern suggests the existence of a space of interaction between government
424 stakeholders alongside 'traditional' communication channels in evaluation in which
425 they can use social media technologies to interact according to what they think is
426 ethical. This pattern enables the inclusion of social media content as a valuable
427 source of evaluation data and thus the uneasy but necessary coexistence of different
428 forms of evaluation of e-government plans, policies and services. Under this pattern
429 evaluation becomes a series of social-media-based evaluations, in which there are
430 different goals being proposed, discussed or assessed, with different notions of effi-
431 ciency being formulated and monitored by government and stakeholders.

432 However, evaluation under this pattern is not a one-sided set of activities.
433 Governments themselves can also use social media to enhance their possibilities to
434 show transparency and accountability (Bertot et al. 2010). An Internet-enabled eval-
435 uation pattern of practice like the one proposed here should also be considered a
436 contested one in which different power relations are at play (Castells 2001). Thus,
437 stakeholders should make careful use of this space, given that they can be reinforc-
438 ing the very same power relations that they aim to resist (Henman 2010).

439 This pattern thus suggests continuous reflection and redefinition of evaluation
440 activities and their purposes. The following questions could help stakeholders to
441 devise ways to start thinking about how best to operate within possibilities and con-
442 straints that are offered by evaluation as a space for interaction:

- 443 • How do our contributions to both official and/or social media evaluations rein-
444 force, resist or develop new knowledge about e-government services and their
445 notions of efficiency?
- 446 • What type of evaluation subjects are we becoming?
- 447 • Who do we want to become as individuals or groups?
- 448 • How can we use official and/or social media evaluation systems to serve our own
449 ethical purposes?

450 These questions could also help people to reflect on how the use of the previous
451 two patterns of evaluation (idealist and strategic) can have consequences in the
452 activities of stakeholders and enable them to critically use evaluation activities to
453 suit their own ethically driven purposes.

454 2.7 Concluding Remarks

455 This chapter has presented three different patterns as tools to help make the evalua-
456 tion of e-government more meaningful towards societal improvement. Traditional
457 evaluation models make unquestionable assumptions about the meaning of
458 efficiency which contribute to generate passivity in evaluation stakeholders.
459 These models mask a number of limitations under their claims for objectivity.

The chapter has explored a case of e-government evaluation in Colombia and provided insights into the challenges that arise in practice when traditional evaluation models are used in practice. Challenges are about the quantification of evaluation results, the role of evaluation experts and how evaluation can inform future action. Using ideas of systems thinking, a number of complementary patterns have been proposed to address these challenges and facilitate critical reflection and action in e-government evaluation. These patterns foster joined-up thinking and collaboration between stakeholders whilst empowering them to contribute to e-government evaluation and societal improvement.

Patterns can be used individually or in combination of each other because they address a number of different challenges in evaluation. Stakeholders should be able to decide what particular combination of patterns suits their own evaluation situation and context. The Colombian case illustrates that in practice evaluation challenges are interlinked. For instance, a need for better quantification in evaluation can lead stakeholders to discuss how best to use evaluation results and vice versa, and both of them have consequences for how people decide to meaningfully evaluate e-government services according to what they think is ethical to do.

Many governments would welcome the possibility of new ideas about e-government evaluation, only to realise that they need to 'let go' or question ingrained evaluation ideas or 'best practices', some of which are being forcefully imposed externally (for instance, by international funding bodies). Other governments might acknowledge that their definition of how e-government contributes to societal improvement is far from clear (Calista and Melitsky 2007). In either case, the proposed patterns and questions formulated in each of them can help e-government stakeholders to start a conversation about e-government as a serving system for society. From there, they can devise ways to act to advance in the accomplishment of desired ideals and purposes with this system in mind.

The practical use of the proposed patterns could have the following implications for e-government evaluation:

- The assumptions about e-government efficiency and how they are shared (or not) by different stakeholders should be questioned.
- The purposes of e-government services should be discussed alongside their perceived support by stakeholders.
- The ethics of evaluation should direct stakeholder engagement.
- The use of social media in e-government evaluation affairs should be encouraged.

At the *policy level*, the proposed patterns aim to challenge an existing 'command and control' mentality in policymaking, in which a predefined goal is not questioned but followed (Chapman 2002; Seddon 2008). To support patterns' use, e-government evaluation policies should encourage and facilitate joined-up thinking, exploration of alternatives, continuous learning and genuine stakeholder participation according to the realities and possibilities of specific evaluation contexts. Insights obtained by the use of patterns should inform future policy definitions, and in this way policy formulation for e-government and its evaluation can be richer and more

503 sensitive to the situations experienced by stakeholders. The patterns together have
504 the potential to generate a learning system about e-government policy and its
505 evaluation or measurement that could benefit governments, other stakeholders and
506 society in general.

507 The ideas of this chapter are far from definite in providing a silver bullet to
508 improve e-government evaluation. However, the insights and reflections aim to
509 open up new directions for research in the practice of e-government evaluation and
510 in this way contribute to improve relations between governments and the societies
511 that they serve.

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