Enlightenment 2.0

Report by the Public Policy, Administration and Sociology group

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Enlightenment 2.0 is a European Commission Joint Research Centre (JRC) initiative:

‘As the European Commission's science and knowledge service, the JRC already provides world class regulatory research. Nevertheless, there is a need to better understand and explain the drivers that influence policy decisions and political discourse. Doing so will help to optimise the way that scientific evidence is used in policy-making. Enlightenment 2.0 will explore the extent to which facts, values and social relations affect political behaviour and decision-making. The aim is to understand these drivers at all levels of the political system, from the individual voter, policymaker or politician; to groups such as political parties and civil society organisations; up to the organisational and institutional level, including national governments. To reflect the breadth and depth of expertise required, the JRC is launching a call for experts in Life Sciences, Social & Behavioural Sciences and Arts & Humanities’.

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Public Policy, Administration & Sociology

**Key drivers of Political Behaviour:**

1. Their response to ‘bounded rationality’. We describe (a) individual cognitive shortcuts, and (b) their organisational equivalents: formal rules, informal ‘rules of the game’, and political system or administrative ‘cultures’.

2. Their position within a complex policymaking environment or system: the venues for decisions; the rules of each venue; the networks they inhabit; the ideas on which they draw; and, and, the socio-economic context and events to which they respond.

**Most promising ‘What Works’ strategies:**

1. Framing and storytelling: identifying how an audience thinks about a policy problem to be able to influence that audience.

2. Understanding the policy process to act effectively within it: such as to learn the ‘rules of the game’ in organisations and networks.
Key questions and approach
We identify the contested meaning of ‘evidence’ and draw insights from studies of policy processes to inform the JRC’s two high-level questions.

1. What are the drivers of policymaker behaviour?

- *Their response to ‘bounded rationality’*. We describe (a) *individual* cognitive shortcuts, and (b) their *organisational* equivalents: formal rules, informal ‘rules of the game’, and political system or administrative ‘cultures’. Policymakers must ignore most issues and most evidence on policy problems. Policy actors exercise power to draw attention to some issues, and their framing of policy problems, at the expense of most others. Administrative rules also focus attention on some issues and influence the ways in which policymakers define them as problems.

- *Their position within a complex policymaking environment or system*. ‘Environment’ describes the factors that influence policymakers: the venues in which decisions take place; the institutions or rules of each venue; the networks they inhabit; the ideas on which they draw; and, the socio-economic context and events to which they respond. ‘Complex system’ describes dynamics such as ‘path dependence’, ‘punctuated equilibrium’ and ‘emergent’ outcomes not controlled by central government.

2. What are the most effective strategies to encourage political decisions to be informed by evidence?

- *Supply and demand*. Many studies emphasise the need to produce high quality evidence and describe it concisely (improve supply) and reform the ways organisations process evidence, such as by improving scientific literacy in government (improve demand).

- *Frames and relationships*. Theory-informed policy studies emphasise the need to frame evidence more effectively, to demonstrate its relevance to policy problems, and adapt effectively to the policy process that exists rather than wait for major reforms.

Overall, we identify a wider context beyond a small group of policymakers at the ‘centre’. Our broad definition of policymakers – *actors who make public policy* – includes individuals, organisations, elected and unelected actors, formulators and implementers, and recognises that the boundary between formal authority and informal influence is fuzzy. We emphasise the *wider political and policymaking context* in which actors make choices. Wider systems and cultures represent the context in which actors share information and debate issues on which they disagree. This perspective can inform more fundamental debate on ways to engage with, or reform, more or less polarized or pluralistic political systems.

In that context, the task for suppliers of evidence is to frame its implications to make it policy relevant and more likely to be demanded by policymakers. Effective framing requires a working knowledge of the policy process, including its key participants and ‘rules of the game’.
There is a common story within science about a new era in politics: policymakers pay insufficient respect to expertise or attention to good evidence. Common solutions are supply side, to produce better evidence and communicate it more concisely, and demand side, to reform how governments process evidence. This story emphasises high academic agreement on what counts as evidence and how to assess evidence quality (with reference to scientific methods) and policymaker ‘irrationality’ or political system dysfunction which undermines ‘evidence based policy’. Policy studies help us tell a less alarmist story:

- Policymakers have always used cognitive shortcuts to evidence. No person or organisation has the ability to process all information, and cognitive efficiency is necessary to policy choice.
- It would be a mistake to assess evidence quality narrowly in relation to a hierarchy of research methods or exaggerate the extent to which academics adhere to this hierarchy.
- Policymakers identify problems and place certain demands on evidence: to help solve problems quickly, and maintain their image of governing competence, credibility, or political support. Policy relevance and availability are necessary gauges of quality, and an evidence-informed solution must be technically and politically feasible.
- Too many commentators declare policymaking failure in comparison to an ideal-type, such as the policy cycle, in which (a) a core group of policymakers can make choices and process them in a straightforward evidence-informed way, through a series of orderly stages, and therefore (b) researchers know how and when to present evidence.
- Policymaking is better understood as a complex environment or system over which the ‘centre’ has limited control. Policymakers must delegate most responsibilities to many other organisation and networks, and respond to socio-economic conditions and events out of their control. Consequently, the ‘action’ takes place in many different parts of the system, there are many different ‘rules of the game’, and policy often seems to ‘emerge’ locally without central direction. We should think of these dynamics as inevitable features of political systems, not temporary dysfunctions.

**Conclusion 1.** When supplying evidence, produce syntheses which combine policy relevance and multiple assessments of research quality. Frame evidence to influence the ways in which policymakers (a) define problems, and (b) determine the political feasibility of solutions.

**Conclusion 2.** Major reforms to improve evidence demand in government may seem attractive, but should not be proposed lightly without considering (a) its feasibility and (b) the democratic consequences. For example, some advocates seek more centralization of power to simplify the policy process, which comes at the expense of legitimate claims to multi-level governance and subsidiarity. Further, most ‘barriers’ to evidence demand are systemic, and relate to factors such as policymaking scale, the division of policymaking responsibilities across systems, pervasiveness of subsystems, and limited coordinative capacity of any political system’s ‘centre’. Focus instead on how to adapt effectively to ever-present policymaking complexity.
Evidence-informed policymaking: the contested meaning of ‘good evidence’

While some see evidence as objective truth, others do not. In some contexts, claims to scientific objectivity often give way to narrow discussions of robust knowledge, or knowledge claims that have gone through rigorous testing and retesting, ideally by different people in different places. The status of such evidence relies on: an agreement of how to test or judge the quality of statements; the amount of available evidence built on a convincing degree of validity (accuracy) and reliability (consistency); and levels of uncertainty – or room for interpretation - about the nature of the relationship between cause and effect.

In other contexts, there are wider debates on the nature of knowledge. It extends to the status of science in politics and society, (a) questioning why scientists should be considered to be privileged in policy debate, and (b) challenging the idea that we can treat research evidence as necessarily benign and produced for the public interest.

Therefore, it would be a mistake to equate ‘evidence’ with a narrow scientific definition based on a hierarchy of methods and to assume that the status of research evidence is welcomed equally.

Rather, we note the pragmatic value of maintaining a more flexible understanding of:

- The plurality of scientific methods, including experimental studies such as randomized control trials (see Box 1); observational qualitative and quantitative studies to identify causal mechanisms (Weiss, 1997; Connell and Kubisch, 1998; Pawson and Tilley, 1997), and, the modelling of complex systems systems (Byrne, 2013; Forss, Marra, and Schwartz, 2011; Rogers, 2008; Westhorp, 2012; Reynolds et al. 2016; De Haan, 2006; Marra, 2011; Reynolds et al. 2016).
- Many forms of relevant evidence, including research and administrative data.
- Many knowledge claims, or propositions about the factual world. Forms of knowledge claim include citizen, practice-informed, ‘working’ knowledge, or knowledge stemming from indigenous traditions or life experiences (Groves and Schoeffel, 2018; Lindblom & Cohen, 1979; Scott, 1999; Kennedy, 1983; Polanyi, 1958).
- The ways in which all knowledge claims interact with the interests, values, and preferences of the people who make them. We need many different measures of useful evidence, from state-of-the-art methodology to factors - such as honesty, moral standards and mutual respect – necessary to make prudent decisions.

Box 1: The special status of randomised control trials (RCTs)

There is a running debate in evidence and policy studies regarding the privileging of RCTs (and their systematic review) to reflect their status at the top of a ‘hierarchy’ of evidence (Oliver and Pearce, 2017; James et al, 2017; Favereau, 2016; Haynes et al, 2012; Ryan et al, 2018; Mowat et al, 2018; Sanders et al, 2018; Lepenies et al, 2018). RCTs are considered as a standard tool for rigorous impact evaluations because they allow researchers to compare systematically
the effect of an intervention with non-intervention (through randomly assigning subjects to treatment and control groups to compare observable effects with and without the intervention). Yet, they do not provide a ‘magic bullet’ to solve common problems regarding correct causal inferences (Rosenbaum, 2002; Rubin 2006; Levy Paluck, 2010). They include lack of the same pre-experience and post-experience data on the two groups, the tendency of some individuals to drop out of one of the groups in a way that makes the groups less comparable on attributes related to the outcome (e.g. clients who perceive little value in a program may tend to quit and then are lost to administrative data), events external to both groups that affect their behavior (e.g. the program in schools not relevant to administrative data), and the group’s awareness that they are being examined having an effect on their behavior. Further, field experiments typically measure the outcomes of behavior, but seldom capture what that behavior consists of. In short, RCTs tell you that an intervention works, but not why (Cartwright and Hardie, 2012).

On a more general level, the risk with RCTs is an exclusive attention on micro research questions focusing on individual behavior and the worship of a single methodological technique (Deaton and Cartwright, 2016; Ravillion, 2018; Reddy, 2012; Lepenies, 2018). An over-reliance on experiments may have the effect of narrowing the range of questions researchers address and can undermine the ability of policy analysts and evaluators to recognize their limits in terms of the evidence they produce, while directing attention only to those questions that are most easily answered by experimental designs (Moynihan, 2018: 4). Consequently, scholars tend to recommend the mix of methods most suited to the task at hand. For example, qualitative research designs are well equipped to uncover the embedded meanings of behaviors as well as those possible social and political dynamics by which the behavior is produced (Levy Paluck, 2010). The first step is to diagnose the local problem using high-quality local qualitative and quantitative descriptive data. Then, search for global evidence from other contexts that have sought to solve a similar problem. Next use the local and global evidence as complementary inputs to assess how the theory of change that motivated the original research and which generated positive impact, is likely to hold in the new context.

Empirical work suggests that encouraging dialogue and respecting different types of knowledge helps meet a wider range of criteria to determine ‘good evidence’, when it:

- encourages creativity
- fosters wider forms of accountability via stakeholder ownership (Wiek et al., 2004; Polk 2014, Maasen and Lieven, 2006; Aeberhard and Rist, 2009; Miller et al., 2008; Wyborn 2015)
- improves the societal and policy relevance of knowledge (Jasanoff, 2004, Beunen and Opdam, 2011, Negev and Teschner, 2013)
- boosts the ‘credibility’ of scientific knowledge (Cash et al, 2003) and the likelihood it will be used in policymaking (Lemos and Morehouse, 2005).

Further, most policymakers prefer a wide range of sources of information, combining their own experience – and inputs from actors in their networks (Oliver and Faul, 2018) – with information ranging from peer reviewed scientific evidence and the ‘grey’ literature, to public
opinion and feedback from consultation (Weiss, 1979; Nutley et al; 2000; Nutley et al, 2013; Cairney and Oliver, 2017; Cartwright and Hardie, 2012; Lomas and Brown, 2009; Nilsson et al, 2008; Davidson, 2017; Strassheim, 2017; Andrews, 2007). This demand reflects the need for policymakers to (a) respond to the demand to be evidence-based, (b) accept that the evidence base is incomplete and contested, and (c) work within the constraints associated with their values, manifestos, democratic mandates, and existing policies. In that context, one key task is to summarise what one thinks is the best evidence and frame its implications to make it policy relevant and in demand by policymakers (Topp et al, 2018; Cartwright, 2009; Cartwright et al, 2010).

The co-production of evidence, knowledge and policy learning

Policy relevance can be achieved via the ‘co-production’ of knowledge by researchers and stakeholders in government and society, and this type of ‘policy learning’ is often more feasible than expert-driven policymaking (Dunlop and Radaelli, 2018). For example, it can help researchers understand the rules or norms in political environments, and respond to factors such as high or low politicization (Hartley, Pearce and Taylor 2017).

The co-production of knowledge is a general term to describe a wide range of practices to encourage dialogue between actors providing different sources of knowledge and perspective (Topp et al, 2018). It is often described as more effective than simply ‘seeking advice from experts’ (Frantzeskaki and Kabish, 2016), particularly when scientific uncertainty is high, there is no simple recourse to expert authority, and ‘there is a predisposition to listen to what the others have to say and to re-consider one’s preferences’ (Dunlop, and Radaelli, 2018: 260). In such cases, policy learning is akin to open dialogue in which people use deliberative techniques to piece together their disparate knowledge and communicate the social norms crucial to cooperation (2018: 260; for critical reviews see Lövbrand, 2011; Esguerra et al, 2017; Bremer and Meisch, 2017; Miller and Wyborn, 2018).

The dialogue between different knowledge holders is highly resource intensive (Lemos and Morehouse, 2005) but often beneficial for mutual learning: researchers learn about issues important to policy, stakeholders learn about the advantages and limits to current scientific knowledge, and the overall group learns by seeing the world through different lenses. It has several more specific stated benefits. Interdisciplinary and academic-stakeholder discussion helps: reduce scientific knowledge gaps (Negev and Teschner, 2013; Bergmann et al., 2012; Jahn et al., 2012); improve links to ministers and business leaders (Kemp and Rotmans, 2009); and, alert researchers to key changes, including the budgets, timing and duration of projects (Dilling and Lemos, 2011). User experience becomes a key standard against which policies and services are planned and evaluated (Zeitlin, 2016) and recipients hold tacit knowledge which is highly valuable to frame goals, needs and expected outcomes, including the perception of what measures work and what side effects are likely to emerge (see Hood, Rothstein, and Baldwin 2001).

Similar broad themes can be found in the literature on ‘policy learning’ (defined here as acquiring new knowledge and skills relevant to policy), which is facilitated by the types of
dialogue we associate with ‘co-production’ or the organizational learning that occurs through dialogue and interaction among individuals:

- Cooperation among actors who share the same beliefs (Sabatier 1987, 1988; Sabatier and Jenkins-Smith 1993) and exchange and discuss information (Mahler 1997).
- Regular dialogue within organizations (Moynihan and Landuyt, 2009).
- Principled engagement and the establishment of formal venues where individuals can deliberate and share knowledge (Emerson and Nabatchi, 2015).
- Institutional and structural features of collaboratives which facilitate the ability of leaders and individual members to interact (Gerlak and Heikkila, 2011).

This belief in the importance of regular interaction aligns with work on organizational learning (Senge 1990; Simon 1991), knowledge management (Argote, McEvily, and Reagans 2003; Argote and Miron-Spektor 2011), and social learning systems (Wenger 2000).

**Drivers of behaviour: 1. Cognitive shortcuts and organisational procedures**

Policy studies seek to capture the effect of ‘bounded rationality’, which describes (a) the cognitive limitations of individual actors and (b) the equivalent resource constraints of organisations. Classic post war accounts – produced before the rise of psychology-informed behavioural economics – contrast bounded rationality with the ideal-type ‘comprehensive rationality’ (Simon, 1976; Lindblom, 1959). The ideal-type describes the ability of (a) individual policymakers to separate their values from facts, and rank their preferences consistently, and of (b) policymaking organisations to process policy in linear ‘stages’ and analyse policy and the policymaking context comprehensively. Bounded rationality describes the limitations to each action, and the ways in which policymakers address them, such as by using cognitive shortcuts and organizational standard operating procedures.

Modern advances in scientific method and information technology *appear* to help solve these limitations, but most remain:

- the ambiguity of problems – or the many ways in which we could interpret them - makes them difficult to define well enough to gather evidence comprehensively
- the ‘radical uncertainty’ of policy problems, and the large number of potential actions to solve them, makes them difficult to predict (Tuckett and Nicolic, 2017)
- more evidence does not help us adjudicate between the unclear preferences of individual actors or the preferences contested by many actors
- the policy process remains complex, and is not summed up well by the language of policy cycles and stages
- policy-relevant science is infused with value choices, from the decision to ask a research question on a specific problem in a specific way, to the ways in which we use evidence to evaluate the success of a policy solution
● Policymakers may acquire new knowledge routinely, but ‘policy learning’ is a political exercise rather than a process to take us closer to the truth (Botterill and Hindmoor 2012; Douglas, 2009; Cairney, 2019a; Dunlop and Radaelli, 2018; Witting, 2017).

The ways in which policymakers deal with bounded rationality have major consequences on the use of evidence. Cairney and Kwiatkowski (2017) describe cognitive shortcuts provocatively as: ‘rational’, to use simple rules - including trust in expertise, or in the rules that experts use to define and synthesise good evidence - to identify good enough sources of information; and, ‘irrational’, to use their beliefs, emotions, habits, and familiarity with issues to identify policy problems and solutions (see Kahneman, 2012; Haidt, 2001; Lewis, 2013; Sloman and Fernbach, 2017; Jones and Thomas, 2017; Baumgartner, 2017; Cairney, 2019a; Dunlop and Radaelli, 2015). However, the latter can be described more positively as ‘computationally cheap’ and ‘fast and frugal heuristics’ (Gigerenzer, 2001).

There has been an explosion of academic and practitioner interest in the heuristics or ‘cognitive biases’ that people use to limit their exposure to evidence (Cairney, 2019a). In policy studies, examples include:

● The competition to draw attention to, and define, policy problems: ‘framing effects’, based on emotional and moral judgements, the ‘representativeness heuristic’, when people overestimate the probability of events because of their vivid nature, and the ‘availability heuristic’ (or ‘processing fluency’), when people relate the size, frequency or probability of a problem to how easy it is to remember or imagine (Alter and Oppenheimer, 2009).

● ‘Prospect theory’ describes people valuing the losses they fear more than the equivalent gains they might receive. It helps explain why ‘advocacy coalitions’ think that their competitors are more powerful than they are, contributing to their tendency to romanticize their own cause and demonize their opponents (Sabatier et al, 1987)

● Cognitive dissonance describes the discomfort associated with holding conflicting beliefs, such as when new evidence challenges an existing belief (Festinger, 1957). Actors may address this discomfort by ignoring new evidence.

● People struggle to distinguish between events determined by chance and skill, producing an illusion of control (Langer, 1975). It can hinder policymakers from understanding their limited impact on outcomes, such as when they make emotional connections between their action and perceived success and seek to boost their ego by repeating their success (Dunlop and Radaelli, 2015).

● A ‘need for coherence’, to identify patterns and causal relationships, helps explain the power of narratives with a too-simple hero and moral (Jones et al, 2014)

● Policymakers use exemplars of social groups to represent overall experience and describe why they reward and punish populations (Schneider et al, 2014)
- Status quo bias, the ‘sunk costs fallacy’, and ‘optimism bias’ (unrealistic expectations about our plans working out well when we commit to them) help explain inertia and the ‘path dependance’ of institutions.

- ‘Groupthink’ and other aspects of organizational psychology place crucial limits on comprehensive searches for policy relevant information (Kam, 2005).

A general focus on cognitive shortcuts has two immediate applications. *First, it helps us understand the ways in which effective actors frame research evidence to address ambiguity* (Cairney et al, 2016; Wellstead et al, 2018). Ambiguity describes disagreement on how to interpret policy problems. Actors compete to draw attention to one ‘image’ of a problem at the expense of all others and, if successful, they limit attention to a small number of feasible solutions (Majone, 1989: 21-4; Zahariadis, 2007: 66; Baumgartner and Jones, 1993: 7; Kingdon, 1984). This competition to resolve ambiguity helps determine the demand for evidence. It is necessarily a *political* process, to exercise power to determine who describes the world and its most important problems. It is not a *technical* process, to research naturally critical issues objectively without reflecting on how we define them, or expect a direct link between policy evaluation and policymaker response (Box 2).

**Box 2: The role of policy evaluation**

Policy evaluation describes – very broadly - the use of research to assess the success or failure of a policy solution. Regular evaluation is a key EU commitment, but its impact ranges from minimal to maximal. Theories on evaluation-use help us understand how policymakers use evidence to make or change decisions (Weiss, 1977, 1979; Kirkhart, 2000; Henry 2000; Alkin, 2017). Most importantly, *few scholars support the idea of direct instrumental use*, or the notion that evaluation findings would lead to immediate and specific actions such as program continuation, expansion, revision or termination (Caracelli, 2000). Rather, they describe a range of possibilities, including (Knorr, 1977; Shula and Cousins, 1997):

- Conceptual use, or enlightenment (Weiss, 1977). Longer term learning, in which evaluations alert people to new ideas, show alternative ways of thinking, alter what is taken for granted as inevitable or subject to change, and can lead to program reform.

- Symbolic use. Justifying a pre-existing position or usefulness of an agency.

- Process use. Learning stimulated by participation in the process of evaluation (Patton, 1997).

This tendency towards indirect impact reflects partly the *cognitive shortcuts* we describe. For example, evaluations are subject to fluency effects: a policymaker is – consciously or unconsciously – less open to the evaluation when she is unable to ‘classify’ the information easily, in line with an existing ‘general understanding of how the world works’ (Weiss, 2001). Evaluations also interact with status quo, sunk cost, or optimism bias when she has publicly announced high commitment to the policy. Alternatively, evaluations can be used *strategically* to buy time. Although evaluation can intensify results-driven accountability over the long term, policymakers can project that sense of accountability to substitute illusion for reality in the short term.
Consequently, the modern literature focuses on the concept of ‘evaluation influence’ to identify the many possible mechanisms through which actors can use evidence to achieve influence (Kirkhart 2000; Henry, 2000). Henry and Mark (2003) identify a complicated typology of potential effects, in which there are four types of influence (general, cognitive and affective, motivational processes, and behavioral processes) on three types of thought/action (individual, interpersonal and collective), which suggests that the literature indicates ways of thinking about evidence use rather than providing a blueprint.

Second, it helps turn a popular understanding of the role of policy-relevant research evidence on its head. We recommend rejecting the commonly-expressed idea that policymakers suffer from a ‘knowledge deficit’ to be solved by more scientific evidence (Crow and Jones, 2018). In its place should be the image of policymakers seeking efficient ways to ignore almost all evidence to allow them to make choices decisively. Indeed, initiatives such as ‘evidence synthesis’ are built on the idea that scientific methods help distinguish between high and low quality evidence and allow us to ignore the latter. However, they need to go one step further, to demonstrate the high and low policy relevance of evidence, which does not map directly onto a narrow scientific view of quality (Topp et al, 2018) and relates more to the demand for evidence which results from a competition to define policy problems. To ‘know your audience’ is to understand their beliefs and evidence demands, and tailor your engagement accordingly.

Effective responses to cognitive shortcuts: foster trust through networks and shared action

One general aim of evidence advocates is to ‘change minds’ with facts, but the literature tends to emphasize the opposite effect: people interpret facts through the lens of their beliefs, and strategies to ‘change minds’ focus more on power relationships than evidence. For example, experimental research finds that political party supporters are driven by partisan-motivated reasoning (Leeper and Slothuus 2014; Lodge and Taber 2013) and have group-based motivations to appear loyal to the policy and position of their party (Petersen et al. 2012). In that context, most solutions relate evidence use to the ways in which people already think:

- Studies of ‘institutional collective action’ suggest reducing the transactions costs of cooperation by facilitating trust and mutual expectations among homophilous groups (Brass 1995; Feiock and Scholz 2010), because people are attracted to those with whom they share similar attributes (Byrne 1971). Attributes include shared beliefs, professional background, or job tasks and skill sets within organizations. Cooperation can be driven by conscious choice or unconscious triggers.

- Feminist studies find that the creation of feminist policy networks - of women from different backgrounds but similar experiences and beliefs - are crucial for getting feminist ideas, needs, and interests on the political agenda (Outshoorn and Kantola 2007; Stetson and Mazur 1995; Marra, 2015). Yet, they diverge in their assessment of equality strategies to gender policymaking. Freeman (1975) criticizes the limitations of reform strategies which do not challenge male-entrenched privileges, whereas Gelb and Palley (1996), Boneparth (1982), and Stetson (2004) praise the advantage of a policy that might achieve some results precisely because it is not explicitly threatening male power (Lombardo, Meier & Verloo, 2017).
In each case, there is a notable absence of advice to simply ‘speak truth to power’, as if the facts themselves were universally persuasive. This process can be counterproductive without ‘fostering trust, collectivism, and an assurance that less powerful or more peripheral actors are not punished for presenting information that challenges existing ways of thinking’ (Cairney and Kwiatkowski, 2017: 5, on Larrick, 2016: 461).

Further, studies using the ‘narrative policy framework’ encourage scientists to focus more on their story and less on their belief in the superiority of their knowledge (Jones and Crow, 2017; Crow and Jones, 2018; Jones and Petersen, 2017). They find that the stories with the biggest impact are on the audiences already predisposed to accept them (Jones and Song, 2014).

Summary. To understand and respond effectively to the drivers of political behaviour:

1. Understand the cognitive shortcuts, and rules, that individuals and organizations use to address bounded rationality when they engage in ‘policy learning’.
2. Adapt by framing evidence to make it relevant to the ways in which policymakers think about policy problems and the feasibility of potential solutions.
3. ‘Zoom in’ to factors associated with evidence-informed policy processes:
   - Regular interaction to co-produce knowledge to improve policy relevance and learning
   - The long-term enlightenment function of evaluation and knowledge
   - Networks built on a combination of trust and shared beliefs.
4. Manage expectations about the role of evidence in politics. This literature does not suggest that we can simply ‘change minds’ with facts.

Drivers of behaviour: 2. Policymaking environments
Policy studies examine the implications of policymaking complexity on the use of evidence in policymaking. The classic ideal-type of policymaking – used primarily to compare with a very different real world - identifies a policy cycle containing a series of well-defined and linear stages (Jann and Wegrich, 2007: 44). In this scenario, we know when and how to present evidence, to: help measure the size of a problem (agenda setting), generate evidence-informed solutions (formulation), and use evidence to implement and evaluate solutions before deciding if they should continue. This image is a story for some policymakers to tell about their work, not an accurate description of it (Cairney, 2015; Topp et al, 2018).

Instead, policy theories try to capture key parts of policymaking environments, constituted by the dynamics summed up by these concepts (John, 2003: 488; Cairney and Heikkila, 2014: 364-6; Cairney and Oliver, 2018):

1. Many actors making and influencing choices at many levels of government. Researchers are competing with many actors – individuals, or members of organisations, coalitions, or social movements (Marks & McAdam 1996) - to present
evidence and secure a policymaker audience, and there are many ‘venues’, or arenas in which authoritative decisions can take place.

2. A proliferation of ‘institutions’, or the rules and norms maintained by many policymaking organisations in many ‘venues’. These rules can be formal, stable, and well understood, or informal, unwritten, changing continuously, and difficult to grasp (Ostrom, 2007). They include the many possible rules of evidence gathering, from who takes the lead to the sources and types of evidence they favour. They include rules on policy success, from enhanced popularity to positive social outcomes (McConnell, 2010). They also influence the type of policies used in different contexts - such as legislation, directives, publications of intentions (White Papers), and contractual arrangements – and their level of enforcement.

3. The pervasiveness of policy networks, or the relationships between policymakers and influencers, many of which (a) develop in ‘subsystems’ or ‘subsectors’, (b) contain relatively small groups of specialists, and (c) are often held together by personal relationships built on beliefs and the trust that comes from successful cooperation in the past. Networks describe the flow of information between actors (Magnusson, Zeitlin, & Pochet, 2005), from relatively exclusive relationships between some interest groups and policymakers, to the wider forms of deliberative and participatory policymaking described more positively by European Union bodies.

4. A tendency for well established ‘ideas’ – as the ‘core beliefs’ of policymakers or ‘paradigms’ in which they operate - to dominate discussion (Hall, 1993). They provide context for policymaking, influencing levels of receptivity to new evidence-informed policy solutions proposed to policymakers.

5. Policy conditions and events that can reinforce stability or prompt policymaker attention to shift. Social or economic ‘crises’ or ‘focusing events’ (Birkland, 1997) can prompt lurches of attention from one issue to another, providing ‘windows of opportunity’ to present new policy solutions (Kingdon, 1984).

Each policy theory or concept uses these insights to describe a policymaking environment in which the role of evidence is unclear. For example, Box 3 describes the different administrative cultures in political systems, which help us understand how actors process evidence.

More broadly, complexity theory describes dynamics that turn the policy cycle imagery on its head (Cairney, 2012). The same input of new information can have a maximal or minimal impact, such as when policymakers pay disproportionately high or low attention to it. Evidence-informed policy change can be constrained by ‘path dependence’ in systems, in which well-established rules limit new practices. Policy makers and influencers are interdependent, and draw continuously on rules and social norms to exchange information. Policy change can ‘emerge’ suddenly from local interaction despite central coordination. If so, the consequences for evidence use can be profound. For example, if policy change often ‘emerges’ in the absence of coordination (and many venues or networks are involved) it is difficult to know to whom (and when) to present evidence. Or, in the absence of ‘law-like’ behaviour in policymaking systems, evidence of success in one context may provide limited
Box 3 The effect of administrative cultures and policy tools

We can think of any combination of written and unwritten rules as administrative traditions, national policy styles, or institutional norms (Painter and Peters, 2010; O’Riordan and Wynne, 1987; Lodge, 2003; Howlett and Tosun, 2019). For example, Weber relates Dienstwissen, or knowledge about how government and administration interact to produce policy, to: methods to recruit public officials and advisors, systems of accountability, and transparency of policy development. Scholars try to capture variations in networks – how people exchange technical and political information - and relate them to the culture of politics in different political systems (Cairney et al, 2017). O’Riordan and Wynne (1987) describe four main approaches, which offer very different requirements for any actor seeking to inject evidence into debate:

1. **Adversarial.** Highly formalized procedures, enacted by large executive agencies, rest on the letter of the law. Judicial reviews of administrative decisions are frequent and based on an elaborate doctrine of formal adjudication. It creates a relatively open forum for public scrutiny where actors compete on the basis of argument. The use of scientific expertise is valued, although the resource-consuming nature of litigations can result in barriers to poorly-resourced interest groups. Despite the checks and balances provided by the courts, adversarial dynamics expose the administration to the risk of high levels of politicization.

2. **Consensual.** Executives are accountable to parliament, and court involvement is infrequent. Bargaining is less formalized, and often run behind closed doors by bureaucrats and interest groups. Actors follow a logic of ‘bureaucratic accommodation’ based on the value of exchanging advice and evidence for access to government, to maintain high trust among participants and minimize visible clashes in public (Jordan and Richardson, 1982; Renn, 1995). Civil servant establish who needs to be consulted, whose voices are relevant, and how to engage with the ‘best available’ evidence (Marvulli, 2017). Advantages such as pragmatism and stability trade-off against exclusivity and limited scope for major policy change.

3. **Fiduciary or authoritative.** Characteristic of countries with strong central governments and weak legislatures, with no tradition of federalism. Bureacrats claim ownership of evidence-creation and policy knowledge in closed circles. Public control is limited, procedures are not institutionalized, and the selection of experts is at discretion of administrative staff, who appeal to bureaucratic efficiency and the ‘common good’ as guiding principles. Negotiations are in private, selection procedures for experts remain obscure, and often contingent on personal connections, prestige or exclusive competence over technologies. Elitism and paternalism trade off against efficiency, the integration of science, government and industry. And greater scope for strategic manoeuvering and policy change (Renn, 1995; Richardson et al., 1982).

4. **Neocorporatist.** Characterized by the inclusion of aggregated interests – such as business or labour - directly into administrative and policy-making processes (Schmitter, 1974; Rothstein, 2003) and granting specific social groups institutionalized entry. It fosters collegiate forms of
administrative decision-making, especially in sectors where a mutual advantage in acting collectively is recognized by the most powerful actors. Strong central government gives way to the formalization of systematic consultation, delegation of power and a re-configuration of the role of the state as convener of interests rather than rule-setter (not behind closed doors). Experts and advisors are recruited on the basis of the closeness to each participating interest group, with bargaining over nominations bounded by scientifically determined limits and seniority (Renn, 1995). Advocates of the model stress openness and efficacy of the approach: consensual agreements are reached through technical committees including representatives of different views in search of a compromise. Critics suggest that new entrants are excluded, there is limited public scrutiny, and power is held by international bodies interested in imposing rules and standards.

These four categories represent archetypes. In practice, political systems have converged as they have adopted cross-national reforms including New Public Management methods and worked more closely with international organizations (Page, 2003; Dimitrakopolous and Passas, 2003; Peters and Painter, 2010; Pollitt and Bouckaert, 2011; Rothstein et al., 2013; Paul et al., 2016). Recent studies of the work of ‘bureaucratic policy analysts’ (Colebatch, 2005; Noordegraaf, 2010; Howlett and Wellstead, 2011; Howlett and Newman, 2010; Radin, 2013; Howlett et al., 2015) capture the diversity and the variety of management techniques and analytical tools in use by many policy-making agencies (Turnpenny et al., 2015), including:

- forecasting and exploring the future (horizon scanning, scenario modelling, risk-based techniques)
- assessing policy options (cost-benefit, cost-effectiveness, multi-criteria analysis)
- exploring problem conceptions and frames (participatory brainstorming, system thinking, game-theory based exercises)
- to ground ex-ante and ex-post policy evaluation (indicators, methodologies involving randomized-controlled trials)

These studies highlight the complex nature of evidence supply networks. Old models of formal centralized in-house policy analysis have given way to larger and more elaborate knowledge markets, composed of sources ranging from private sectors consultants to experts in think tanks, political parties, NGOs, universities and other agencies, each time interacting in different ways with professional policymakers, whose skills, competences, and attitudes have changed. Overall, these archetypes and trends present a strong need to understand the ‘rules of the game’ to know how best to incorporate strategies for greater evidence use:

1. Any attempt to re-design the dynamics of evidence demand and supply must take into account elements of administrative practices beyond formal provisions. Clarify at the outset what analysts actually do and how their work is used by decision makers.
2. However, the difficulty in pinning down exact policy styles is what makes them so important: we need to understand the extent to which bureaucrats still make (perhaps internal cognitive) reference to the archetypal systems in which they were trained.
Oliver et al (2014) conducted a systematic review of 145 articles published – largely in health journals - since 2000 on the ‘barriers of and facilitators to the use of evidence by policymakers’. Cairney (2016: 90-2) supplements this search in the field of environmental science. Although the literature search is comprehensive, the literature itself may seem narrow because, in most cases, the assumption seems to be that high quality, policy-relevant evidence exists, to help solve a well-defined problem. In that context, these sources provide several reasons why there may not be a full uptake of research evidence in policy: there is poor access to published evidence; it is not well communicated; engagement and knowledge exchange is costly; many policymakers are not trained to be science literate; and/or it was a case of bad timing (Oliver et al, 2014: 6). In most cases, the concept of ‘knowledge brokering’ appears to offer a relatively straightforward solution. However, the wider literature offers further categories of barriers, including:

- **The evidence is not fit for purpose.** For example, evaluations are unable to pinpoint the causal effect of an intervention, or replicate the effect in different contexts, often because policy is actually the combination of many interdependent instruments (Lester, 2018; Bates and Glennerster 2017)

- **High salience and political competition.** Regular elections undermine long term evidence-informed policymaking, partisanship undermines cooperation (especially in plurality systems), and interest groups compete to interpret the implications of evidence.

- **Organisational barriers.** Studies on ‘evidence based management’ suggest that most policy related decisions do not rise to the level of political leaders in central governments or legislatures. Many are everyday decisions by lower-level administrative officials in subnational governments. Obstacles include a lack of understanding about where to present evidence, or relate it to day to day policymaking and annual budgeting which is often rule bound, legalistic or incremental.

- **The lack of ‘holistic’ governance.** There is no lack of ideas to reform policymaking practices, such as to improve links between separate processes including performance management and evaluation (Newcomer and Brass, 2016; Nielsen and Hunter, 2013; Mead, 2003), encourage administrators to use realist evaluation (Pawson and Tilley, 1997) alongside more nuanced statistical evaluation to better understand why programs work (Pollitt, 2013; Heinrich and Lynn, 2000), and fund more pilots to better understand how programs work in local contexts (Lester, 2018). However, few have provided a ‘magic bullet’ to the lack of joined-up government.

In these cases, the ‘evidence-policy gap’ will not be solved by more concise reports, a more science-literate audience, or the serendipitous coupling of the demand and supply for evidence. Further, as our previous discussion of evidence suggests, the idea of a knowledge-policy gap is misleading without taking into account the forms of knowledge incorporated continuously
(such as experiential knowledge) and finding more reliable ways to measure the lack of uptake of others (such as scientific evidence).

Summary. To understand and respond effectively to policymaking environments:

1. Understand key aspects of policymaking environments - the proliferation of actors, rules, networks, dominant ideas, and socioeconomic conditions – which influence policymaker choice and evidence demands.

2. Recognise that the ‘rules of the game’ are written and unwritten, which requires some immersion in policymaking culture to understand.

3. Consider the effects of complex systems, in which the same injection of evidence can receive minimal or maximal attention, and policy can ‘emerge’ without central control.

4. Expand your understanding of the ‘barriers’ between evidence and policy, from communication and timing problems, towards problems with the evidence itself, issue salience and partisan competition, organisational rules, and the inevitable consequences of a lack of holistic government.

Box 4 Central and Eastern European (CEE) countries
Most of the evidence on policy studies relate to a small number of countries, with Western Europe over-represented in analysis. Roughly half of EU member states are post-communist. Their experiences often emphasise particular aspects of policymaking environments which influence the use of evidence. Most notably, major ideological divides combined with frequent alterations of party of government often cause:

- Wholesale changes in personnel, policies, and attitudes to central-local relations (Meyer-Sahling, 2009; Gajduschek & Zemandl, 2018; Ágh, 2013).

- Minimal willingness of a new government to use systematic evaluation evidence to assess the success of previous governments (Gajduschek and Zemandl, 2018), which contributes to a ‘flying blind style’ of policymaking (Gajduschek, 2016; Szepesi, Borbás, & Baláš, n.d.; Bennett & Howlett, 1992).

- Policy volatility, with extreme changes causing routine policy failure (Kemmerling and Maskzin, 2017).

- The politicization and instability of public administration systems (Gajduschek & Zemandl, 2018). For example, political parties use appointments to reward their supporters and reinforce control over the policymaking process (Kopecky & Spirova, 2011; Kopecky, 2008; Kopecky, Mair, Spirova, 2012; Meyer-Sahling, 2008; Meyer-Sahling, 2009; Meyer-Sahling & Jáger, 2012; Meyer-Sahling and Veen, 2012). These factors minimize opportunities for policy learning and the use of evidence.

- The limited recruitment and retention of high quality civil servants and experts (Heywood and Meyer-Sahling, 2008).
As a result of politicization, instability in an organization’s professional core and networks key to knowledge production and information sharing (Zemandl, 2013; also Zemandl, 2017).

For example, in Poland, instability prevents the institutionalization of processes geared towards evidence gathering, coordination and consultation (Heywood & Meyer-Sahling, 2008: 61). In Hungary, significant losses in middle management combine with the relatively high volume of less-experienced personnel (Zemandl, 2013). Further, partisan appointees who divide and fire part of the professional core, while instituting a loyalist and hierarchical management regime, can lead to the filtering and reduced visibility of evidence (drawn from independent analysis) construed as critical toward the new policies and partisan leadership (Zemandl, 2017). Awareness of such experiences can help identify potential institutional and environmental barriers to the use (and acceptance) of evidence in highly polarized political environments.

**Solution 1. Supply side: produce better evidence and provide it more effectively**

There has been significant investment in multi-level interventions to promote evidence use, from individual-level initiatives such as fellowships and secondments, to large-scale initiatives such as ‘What Works’ Centres, and funding mechanisms for policy-relevant research. However, it is difficult to identify systematic assessments of their impact at the micro (individual researchers and policymakers), meso (intermediary organisations) or macro (role of evidence in policy processes) level.

There is also now a large literature on the strategies that might allow political decisions to be informed by evidence. However, it tends not to be informed by policy theory. The latter is crucial to full analysis, but often as a way to raise key dilemmas, prompt ethical choices, and compare individual versus systemic perspectives, rather than as a magic bullet. For example, Oliver and Cairney (2019; see also Cairney and Oliver, 2018; Oliver et al, 2014; Cairney, 2016: 90-2) provide a systematic review of ‘how to’ advice, primarily from academics with experience in or lobbying government. The recommendations from these sources are fairly consistent and can be summarised in the following categories:

1. **Produce better quality evidence on policy problems and solutions.** Use specific well-established research designs, methods, or metrics.
2. **Improve dissemination strategies and make your research accessible.** Write more concise and less jargon-filled reports, aiming for the general reader. Use good stories based, for example, on emotional appeals or humour. Boost resources for dissemination, and remove journal paywalls.
3. **Understand the policy process and pressures on policymakers.** Note the busy and constrained lives of policy actors. Maximise your use of established ways to engage, such as in advisory committees. Be pragmatic about what ‘success’ looks like, accepting that research rarely translates into policy options directly.
4. **Develop relationships with policymakers.** Be accessible. Discuss topics beyond your narrowest expertise. Be humble, courteous, professional, and recognise the limits to your skills when giving policy advice. Respect policymakers’ time and expertise. Being
present will allow you to address the importance of timing and serendipity in politics, and help break down communications and cultural barriers associated with the different incentives, practices, and language of researchers and policymakers.

5. **Decide which roles to pursue yourself or via intermediaries.** For example, scientists may seek to explain research and their implications for policy options, while leaving specialist roles such as policy advice and lobbying to knowledge brokers and advocacy groups. Direct engagement may be fruitful but risky to one’s reputation or credibility, and the benefits or rewards are not shared equally among academics.

**Problems with simple supply side advice**

*At first glance*, some of this advice appears to be consistent with key reference points in policy studies. For example, multiple streams analysis (MSA) suggests that ‘policy entrepreneurs’ can make a difference to the uptake of evidence because they recognise three key requirements: tell stories to help draw attention to one way to frame a policy problem; have an evidence-informed and technically/politically feasible policy solution ready, to attach to a rise of attention to a problem; and, exploit the temporary willingness and ability of policymakers to select that solution (Kingdon, 1984; Cairney, 2018). Yet, MSA only makes sense in relation to the wider policymaking environment. Indeed, Kingdon described entrepreneurs as surfers waiting for the big wave, to add a sense of scale and emphasise that an individual’s success is generally dependent on the nature of her environment.

Our focus on cognitive shortcuts and policymaking complexity helps qualify key aspects of ‘how to’ advice by shifting the balance of attention from the role of individuals to the context in which they operate. For example, consider the strategies that one would derive from each description of the policymaking environment’s key features:

- If there are so many potential authoritative venues, devote considerable energy to finding where the ‘action’ is (and someone specific to talk to).
- Even if you find the right venue, you will not know the unwritten rules unless you study them intensely. To be effective is to act according to those rules and ‘policy styles’ (Box 3).
- Networks are often close-knit and difficult to access because (a) bureaucracies have operating procedures that favour some sources of evidence and exclude others, and (b) they are incredibly difficult to research. Evidence advocates can find themselves to be privileged insiders in some venues and excluded completely in others. In these circumstances, to be effective, policy actors must find ways to build up trust (often by providing evidence regularly, and not complaining publicly if policymakers don’t act on it as intended) and engage with the ways in which policymakers define policy problems, even if – given the choice - they would not define those problems in the same way. Further, by engaging in such activities to become more effective in networks, evidence advocates are increasingly unable to choose simply to declare the facts without discussing policy recommendations. To build up trust requires following such ‘rules of the game’.
If you seek to use evidence to challenge an existing paradigm, you need a persuasion strategy good enough to prompt a shift of attention to a policy problem and a willingness to understand that problem in a new way (or to secure more attention from another powerful audience). In such cases, the aim is to boost the policy relevance of evidence rather than focusing on narrow scientific criteria on quality. Further, communication for policy is a political exercise to frame issues, not simply a requirement to reduce the report length and write in plain language.

In that context, policy studies recommend investing your time over the long term – to build up alliances, trust in the messenger, knowledge of the system, and to seek ‘windows of opportunity’ for policy change – but offer no assurances that any of this investment will ever pay off (see Cairney and Oliver, 2019; drawing on Cairney, 2016: 124; Cairney and Oliver, 2017; Weible et al, 2012; Stoker, 2010). Or, they derive, from empirical studies, the sense that individual skills (such as communicating evidence well), strategies (such as networking), and an entrepreneurial spirit are necessary but insufficient conditions. Other conditions may include: possessing material resources to influence policymakers, such as the ability to represent important constituencies (including business or professional groups); and, being in the advantageous position of proposing evidence whose implications are consistent with the aims or beliefs of policymakers or other powerful actors.

Raising new ethical dilemmas about effective strategies for evidence uptake

In this section we use specific theories to help our audience think about the ethical dilemmas that evidence advocates face when trying to be effective in a highly political policymaking environment (as discussed by Cairney in his series of ANZSOG lectures). Consider a staircase analogy in which key ethical dilemmas seem to become more problematic with each upwards step:

1. **Change levels of attention to issues, not minds.** The narrative policy framework (NPF) suggests that ‘narratives’ – consisting of a setting, characters, plot, and moral – can produce a measurable policy impact, but primarily to reinforce the beliefs of policy actors (Shanahan et al, 2017). The existing beliefs of the audience often seem more important than the skills of the storyteller. Therefore, to maximise the impact of evidence, (a) tell a story which appeals to the biases of your audiences, and (b) employ ‘heresthetic’ strategies in which we try to increase the salience of one belief at the expense of another rather than ask someone to give up the belief entirely (Riker, 1982; 1986).

2. **Engage only with actors who share your beliefs.** The advocacy coalition framework (ACF) suggests that actors enter politics to turn their beliefs into policy. In highly salient issues, coalition actors romanticise their own cause and demonize their opponents. This competition extends to the use of evidence: each coalition may demand different evidence, or interpret the same evidence differently, to support their own cause. If so, the most feasible strategy may be to provide evidence as a resource to support the coalitions which support your cause, and engage minimally with competitor
coalitions who seek to ignore or discredit your evidence. Only in less salient issues will we find a greater ‘brokerage’ role for scientists (Ingold and Gschwend, 2014).

3. **Exercise power to limit debate and dominate policymaker attention.** Punctuated equilibrium theory (PET) suggests that policy actors frame issues to limit external attention. If they can define a problem successfully as solved, bar the technical details relating to regulation and implementation, they can help privilege the demand for technical evidence from scientific experts.

4. **Frame evidence to be consistent with objectionable beliefs.** Social construction and policy design (SCPD) theory suggests that, when dealing with salient issues, policymakers exploit social stereotypes strategically, or rely on their emotions, to define target populations as deserving of government benefits or punishments. Some populations can challenge or exploit their image, but many are powerless to respond. Or, in lower salience issues, there is more scope for bureaucrats and experts to contain discussion to small groups. In both cases, many social groups become disenchanted with politics because they are punished by government policy and excluded from debate.

The role of these discussions is to expose the assumptions that we make about the superiority of research evidence – and that researchers are driven primarily by the ‘common good’, rather than by vested interest - and the lengths to which we are willing to go to privilege its use. Policy studies suggest that the most effective ways to privilege research evidence are to: manipulate the order in which we consider issues and make choices, refuse to engage in debate with our competitors, frame issues to minimise attention, or maximise the convergence between evidence and the rhetorical devices of cynical politicians. However, they also expose stark ethical dilemmas regarding the consequences for democracy.¹

Put simply, some of the most effective evidence advocacy strategies may be inconsistent with wider democratic principles and key initiatives such as participatory policymaking and the co-production of knowledge. If so, these discussions prompt us to consider the ways in which we can value research evidence up to a certain point, to produce more cooperative strategies which balance efforts to limit participation (to privilege expertise) and encourage it (to privilege deliberative and participatory forms of democracy).

For example, ‘collaborative governance’ is a method of collective decision making where public agencies and non-state stakeholders engage each other in a consensus-oriented deliberative process to invent and implement public policies (Ansell and Gash, 2008; Bardach, 1998; Coglianese; 1997; Freeman; 1997; Fung and Wright; 2001; Huxham and Vangen, 2004; Imperial, 2005). Most scholar-advocates describe it as demanding but, if successful, it can lead to increased government accountability, greater civic engagement, consistent downstream implementation, and higher levels of process and program success (Freeman 1997; Fung and

¹ These ethical questions regarding the role of ‘manipulation’ are categorically separate from the misuse of evidence during evaluation (Alkin, 2017; Stevens and Dial, 1994; Christie & Alkin, 1999). Types of misuse include commissioning evaluations to justify existing action, subverting the process by limiting resources, and cherry-picking the results (Alkin, 2017: table 1).
Wright 2001; Hicks et al. 2008; Lasker and Weiss 2003; Leach 2006). As described, it shares many features of Ostrom’s Institutional Analysis and Development framework (IAD), designed largely to study the effectiveness of collective processes for policy design (see Heikkilä and Andersson, 2018).

A foundational commitment in collaborative governance is the inclusion of all those affected by a problem into the collaborative cycle where problems are discussed, solutions formulated and implemented, and results evaluated. As Chrislip and Larson (1994) argue, ‘The first condition of successful collaboration is that it must be broadly inclusive of all stakeholders who are affected or care about the issue’. A virtuous cycle of collaboration in policy making also emerges when collaborative forums focus on ‘small wins’ relying on previously shared trust, commitment, and mutual understanding (Ansell and Gash, 2007).

**Solution 2. Demand side: train policymakers and reform policymaking**

The ‘barriers’ and ‘how to’ literatures have stronger but less specific recommendations about demand side factors. The most common recommendations are to reform the ways in which individual and organisational policymakers process evidence, and improve scientific literacy within government, to ensure that policymakers can separate high- and low-quality sources of evidence. We have already assessed critically this focus on evidential quality and questioned the extent to which more science literacy would solve major political and organizational barriers to evidence-informed policymaking. Put most simply, policymakers will always face key limitations regarding, for example: their need to ignore most information to make choices, and delegate most policymaking to actors within policy networks; and, their limited coordinative capacity when policymaking responsibility is spread across many venues. Indeed, key initiatives such as the JRC’s knowledge management for policy (KMP) programme are built largely on pragmatism, to foster organisational change and team-building in the absence of a major surge in science training in policymaking or other types of major policymaking reforms in the EU and its Member States (Topp et al., 2018).

In that context, what type of reforms seem feasible?

There are specific initiatives from which we might learn. First, for example, Chupein and Glennerster (2018) describe co-producing study design. They recommend scaling up evidence-informed programs through partnerships with policymakers: the implementing organization is involved in research design from the beginning, and trust builds between researcher and government. Elements conducive to this process include: flexibility in program design; the institutions’ strong local reputation and ability to operate at sufficient scale; policymaker commitment to learn the truth about program effectiveness; researcher desire to learn about the policymaker’s priorities; and, regular close engagement (Chupein and Glennerster, 2018: 68).

Second, the Abdul Latin Jameed Poverty Action Lab (J-PAL) at MIT has identified several conditions that contribute to the successful development of institutional conditions: the partnership should be strongly demand-driven, the baseline institutional culture should be favourable to innovation, there should be an internal champion and support from top leadership, and there should be favourable political and economic conditions. Equally
important is a formal framework that clearly delineates all partners’ responsibilities. Researchers must give back by providing a valuable service to their institutional partners by demonstrating a long-term commitment to the partnership and helping them identify and answer critical policy questions as they change over time. Partnerships should also be broad-based; the research team should be able to provide technical assistance, such as training staff on evaluation methodology or how to assess quality of evidence and apply it in the partner’s context. It is also helpful to provide intermediate support in areas other than impact evaluation, such as how to develop robust monitoring systems or analyze data to identify problems. This kind of help gives the partner some quick wins even before the research produces results. To generate, synthesize, and effectively use rigorous evidence in policy decisions, researchers and organizations such as J-PAL need to develop long-term partnerships with committed institutions willing to innovate and test.

However, in most cases, advocates of co-production (to aid policymaker research literacy) do not offer specific models or blueprints for action. Rather, they outline key three key factors to consider.

1. **Identify key principles and mechanisms crucial to success.**
   - Co-produce your study design with policymakers to understand their demand for evidence and build up trust.
   - Foster institutional conditions conducive to policy innovation.

2. **Seek clarity on issues including:**
   - From whom you seek evidence - some members of the research community only; citizen scientists; experts from industry, government or NGOs; people with familiarity on the issue; people with high interests or strong value commitments – and how you will assess their claims.
   - The relationship between different forms of evidence gathering, including formal institutions and pathways - What Works Centres, science advisory systems; policy research units, statutory reporting bodies – and informal networks through staff, media channels and lobby groups (Oliver and Faul 2018).
   - The role of mediators or brokers who are fluent in both ‘languages’ and non-biased towards either party involved. Many international organisations – such as the OECD, World Bank, UNESCO, EU - encourage a process of choosing, cleaning, packaging and discussing specific data, before sending them towards policy-makers to be used. Mediators frame the issue, define a manageable number of possibilities, and set the stage for further negotiations.
   - The role of international organizations and ‘transnational expert institutions’. Generally speaking, they represent providers of knowledge which combine evidence and values and should therefore not be assumed to be impartial sources of evidence (Jasanoff,
2004; St Clair, 2006:56), unusually legitimate, or contributors to a more diverse range of knowledge (Kapoor, 2004; compare with Zemandl, 2017)

3. Form a checklist of questions crucial to effective evidence use:

- How and when to be sure ‘enough’ evidence is available to act on.
- How and when to engage with policymakers to propose policy options.
- The roles and codes of practice of researchers involved in policymaking.
- How to ensure accountability and transparency at the different steps of evidence production.
- How to ensure an efficient participation of citizens, civil society and stakeholders in an evidence-based policy process.

**Box 5 Key procedural changes to enhance evidence based policy decisions**

*In most cases, our report discusses relatively abstract initiatives on evidence uptake. In this short discussion, De Feo reflects on specific changes to EU processes.*

In the EU legal frame, there is little appetite for evidence-based decisions because no single actor feels the ‘ownership’ of tools to monitor the efficiency and effectiveness of legislation. The Council has little interest to follow a main task of the Commission. Specific problems are addressed by Member States directly with the Commission. The European Parliament, together with the Court of Auditors, assumes the task of monitoring the implementation of legislation. Despite the commitment of some parliamentary committees, the monitoring of legislation remains a marginal activity. The *raison d’être* of a Parliament and its Members is to legislate, to change the rules, to allocate funds. In most cases, the monitoring of a policy does not lead to a decision, modification of legislation allocation of funds. This is mainly due to a number of rigidities in the system, discouraging serious control of implementation based on evidence. A change in the procedures could help to make the process more effective and give more relevance to the scientific support of decisions:

- **The time spam of regulations.** The length should be minimum ten years, to give the Commission and the legislative authority time to produce evidence to inform revisions.
- **The fixed financial envelop** is a disincentive to the modification of the regulation. The amount is a guarantee for the potential beneficiaries and it can be changed only marginally. The implementation rate, more than the quality of expenditure, remains an important indicator to evaluate the Commission’ managers; even if, in this respect, the Commission efforts for a budget focused on results are changing the administrative culture. No fixed financial envelop, should be inserted in the regulation; only an indicative amount that the Budgetary Authority have to allocate every three years, after verification of performances.
- **The national pre-allocation**, where necessary, should also be indicative and respected only after evaluation of performances.
- **A monitoring procedure** should be established, even with an Interinstitutional agreement, where each year the Legislative and Budgetary authority agree to carry out in-depth monitoring and performance audit of a limited number of policies, in agreement with the Court of Auditors. At the end of a contradictory procedure, the legislative authority might ask the Commission to present a proposal to modify the regulation, where necessary, or agree to allocate. This rolling monitoring mechanism, all the EU legislation will be submitted to in-depth evaluation, based on evidence.
- **The multiannual financial framework** should also be adapted to this situation: the duration of the MFF, should be prolonged from seven to ten years. Every five years, the new Commission should present a meaningful revision of the MFF to comply with the new priorities for the following five years, so that there is always a ten year plan, but revisable at each renewal of the Institutions every five years.

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**Summary. The benefits and limits to demand and supply side solutions:**

1. Evidence communication, timing, and science literacy in government are important.
   - However, communication is about exercising power to frame issues, not a technical exercise. The decision to frame evidence prompts major ethical dilemmas about how far you should go to privilege scientific evidence in policy.

2. Investing in relationships and networks, and being 'entrepreneurial' is important.
   - However, influence requires a long term investment with no guarantee of success.

3. It makes sense to consider the value and feasibility of a range of reforms, from more collaborative governance which has high political support and low set-up costs, to more fundamental reforms to redistribute power, which is more costly.
   - However, the evidence on these initiatives is patchy and there is so much about the process that we do not know.
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Note: key parts of the report were written by the authors engaged in 'double writing' (describing similar insights while writing different texts for different audiences). In other words, parts of the text relate strongly to forthcoming (such as Cairney, 2019a; 2019b) and new publications (such as Cairney and Oliver, 2018).