General Conclusion

The governance of ethics refers the institutional and organisational conditions that the procedures of assessment must fulfil so that ethical questions can be addressed in the field of emerging technologies. We showed that classical proceduralism did not adequately address problems raised by an ethics of science and technology, for traditional approaches to ethics contain a ‘blind spot’ vis-à-vis the relationship between norms and contexts. The insufficiency of proceduralism was evident in that the arrangements that are necessary for organising the reflexive capacity for the actors to identify the various effective possibilities on which the operation of the selection of the norm will be carried out are problematic. We then proposed a blending of approaches: procedural (rule-based), reflexive (context-based) and substantive (value-based). It must be said that the method of comprehensive proceduralism is likely to apply to a wide range of emerging technologies: gene, nuclear, nano, information and communication, internet. This is why we took some cases from these various domains as examples and resources for scrutinizing the relationship between emerging technologies and ethical governance.

The hypothesis is that existing governance mechanisms for technical research and development projects do not adequately address ethical and social issues that can arise from such projects, either before or during, the project stage. As a result, the desired outcome of projects to produce technologies that meet today’s ethical challenges and result in socially acceptable technologies, is at risk. Governance theory has been used as a means to investigate options for governance, and existing theories and processes for governance have been shown to be deficient in various ways. The empirical research suggests that the institutional mechanisms of the European Commission for addressing ethical issues in Research and Development projects in place at that time were not in themselves enough to either alert project participants to the ethical aspects of the technical components of the project, nor provide guidance on how they might do this. We discovered that the majority of the projects did not consider ethical and social aspects within their research and technology design. Our analytic grid, based on our theoretical approach allowed us to see the patterns of governance models used by the projects and from that we were able to map the various governance paradigms evident from political and ethical governance theory literature.

The same analytical standpoint was applied to other fields of technology, which showed that there are similar elements of ethical governance problems across fields other than ICT and Ambient Intelligence, i.e. our starting point. One of the areas we looked at was that of innovation, as a process itself, and in connection to that the design element of technology development, with a focus on value-driven design. Our aim is to open the possibilities available to project participants, including technical developers, to allow them to explore the potential ethical and social implications of the technology research and to allow them to seek solutions that are relevant to the context of the technology under development, based on norms that have meaning within that context. The process we are advocating, and which we
have called comprehensive proceduralism, aims to highlight the connection between norms and values within a specific context. Such a context is not pre-defined or pre-determined but is instead discovered and shaped, thus emerging throughout the ethical reflexive process. Now we turn to understanding the political implications of this approach with brief reference to the historical development of policy discourse of European research and technology development.

It is necessary to organise the reflexive capacity of the actors by constructing the capacities of the reflexivity in such a way as to not presuppose it as already existing due to a formal method, such as argumentation, deliberation, debate or discussion. All of these formal methods presuppose their own required conditions and as such do not necessarily involve reflexivity. It is therefore important to make sure that every application of a norm presupposes not only a formal moment of choice of its acceptable normative constraints, but an operation of the selection of the possibilities according to the acceptable way of life within the community concerned. Without a negotiated construction of the moment of reflexivity that is specific to the conditions for the application of the norm, however, there will be no control of the process of the expression of the norm, and it will be left to the dominant common culture to express.

Thus, what is often presented as the only effective choice is always conditioned by an operation such as the above (including in the construction of the deontological codes). Criticism of this reconstruction of the reflexivity used in the construction of the social norm also affects the moral approaches to legitimacy. Institutional arrangements for this reflexivity, since this is the very aim of the project, in order to overcome the fundamental limitations of existing ethical approaches, which ignore the issue of the moment of the application of the norm. Determining these arrangements will allow actors and institutions to go through a learning process when confronted with an ethical issue, reflect on the success of the learning process, and reframe the context of the situation in order to more effectively establish a norm within the context, and from a more official perspective, will allow us to assess the effectiveness of the result of that process.

To take into account the limitations and achieve second-order reflexivity, we need to escape the binds of formalism, which constrains ethics with its presuppositions and internal limitations. To more effectively incorporate ethical norms into contexts, we need to construct the framing of the context in relation to the norm (i.e. not presuppose it), then open up this context so that we can have a reflexivity on the opening of this framing (that is, a feedback mechanism). In order to do this, we need to reconstruct, from a normative perspective, how research projects should reconstruct the two-way relationship between the norm and the context to overcome the fundamental limitations outlined above in order to achieve second-order reflexivity. Without the implementation of a reflexive capacity, and the construction of norms, normative injunctions risk remaining inefficient even if the objective is judged relevant and legitimate. The operation of judging the conditions of the choice of an improved way of life, facilitated by technological development is distinct and asymmetric. Asymmetry is the way in which the social meanings of a norm are conditioned by an operation that cannot be anticipated by formal variables of reasoning variables that condition the norm’s relevance.

The point of all of this is to provide a deep, philosophical grounding for the manner in which we can interpret and understand the epistemological position of the social actor which is missing from the accounts of governance so far, including that of the Louvain School. Recalling EGAIS’ central problematic, concerning the ethical governance of research in European projects, this is of paramount importance in two ways – one is to secure legitimacy and efficiency for the governance measures, the other is to ensure the ethicity of the governance measures:
1. **Legitimacy:** Is secured via the pragmatic reconstruction of the epistemological position of the actor in that the actor herself is represented in the governance measure. There is no presupposition or imposition of a framing from experts or anyone else.

2. **Efficiency:** Is made possible as through engagement with the epistemological position of the social actor, their understanding is secured and so governance injunctions are made comprehensible, debatable and capable of being enacted.

3. **Ethicity:** Is enabled as the range of possibility for any given social actor is cashed out in terms of how they understand the world around them and what that understanding entails by way of possible actions.

In recognising the diversity of reasons we recognise the role of value in self-perception and social deliberation and so we can properly represent in public reasoning the actual public rather than a theoretical abstraction. Such abstractions are clearly at play in the models of governance where ‘the public’ is seen as ‘in need of education’ or ‘overly risk averse’, such as in the technocratic-instrumental, ethocratic-normative and epistocratic-cognitive paradigms. In the light of what has been argued in this and previous deliverables these abstractions should appear quite anaemic now. So, we adopt an attitude necessary for ethical thinking in that we reconstruct the object of ethical enquiry – the social actor. This permits the policy-maker (in the case of governance) to provide reasons for a social actor to adopt a norm, as opposed to merely dealing in commands. This procedure ought also to be seen as the background of dialogical engagement among the public themselves. Since this engagement runs on reasons embedded within the worldview of the social actors, this also gives a means whereby such an actor can adopt a reflexive stance upon their own values and adopt a norm independent of their own predilections.

We see that presuppositions blight any attempt to understand the perspectives of those engaged in governance approaches from either the governing or governed perspective. These are based in the presuppositions discernible behind governance approaches that inhibit the construction of contexts, and the mode of rationality assumed to be effective in all contexts, i.e. argumentative rationality. At the very least, this hampers the effectiveness of the measures, while standing as an obstacle to their legitimacy. In so understanding this issue we have a basis to move toward addressing them in a way that is not merely ad hoc but rather is grounded in theory and that can affect practice in a positive way. So with the problem clearly defined and the basis upon which it is a problem understood, we have cleared the ground for of in which we can propose ways to approach the specific problems we detect with an ambition of treating them.

We obviously do not intend to revolutionize the ethical governance of emerging technologies, and the emphasis is on a more interpretive use of the existing tools. This requires the reconstruction of the context of the actors involved in the governance process, and a consideration of the subjective values on which can be built and embodied the ethical norms. We have tried to show how some aspects of this requirement were already expressed in several schools of thought and in several technological projects. The ambition of EGAIS is to help unite these impulses, developing the overall concept of ‘comprehensive proceduralism’ as a framework for covering them. No doubt that, in the coming years, the need for ethical norms adapted to the new realities of the development of technology will become more and more pressing, and we hope that the principles that we put forward will be able to be of great help for the task of establishing them.