



The Essex Centre for Data Analytics  
Data Ethics Committee  
Terms of Reference

Version DRAFT  
Updated 27<sup>th</sup> January 2021

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## **Background**

1. Essex Police, Essex County Council and the University of Essex have established an Essex Centre for Data Analytics (ecda) to work together to deliver data analytics and data science projects for the benefit of the people of Essex. ecda will create data-led insights to strengthen the partners' ability to prevent harm, keep people safe, and provide the best opportunities and services for the county, its residents and business community.

### **The ecda mission is to:**

be a centre of excellence for ethical data analytics, championing and supporting the use and development of analytical approaches across Essex public services by

- Delivering data projects that provide actionable insight to help manage shared problems across Essex public services
- Building capability across the Essex public sector by running events, providing supporting infrastructure and sharing best practice to support organisations in their use of data
- Influencing senior decision makers so that their organisations make better use of data and cooperate and share data with other organisations across the county.

2. The use of data in public services may give rise to ethical questions and considerations. The Data DEC (DEC) will provide independent advice to ecda regarding ethical issues arising from ecda's work.

## **Roles and responsibilities**

### **Advising on ethics**

3. The DEC will be responsible for providing ecda with advice on any ethical consideration or issues arising in each of the Centre's data projects, and on whether they should go ahead and/or be altered in some way. In addition, the DEC will suggest any action or omission they consider appropriate with regard to the ethics issues identified. In doing so, the DEC will follow the process and the principles contained within these Terms of Reference. (See Advice Process for more details) In addition the DEC and its members must have regard to, and comply with, the code of ethics relating to each of the core sponsor organisations (Essex Police, Essex County Council, and the University of Essex – details of which can be found on the web sites for each organisation).

### **Advising ecda**

4. The DEC will provide advice to ecda on each proposed data project. However, engagement on sensitive projects, for example those concerning national security, will be considered on a case by case basis and any decision not to refer to the DEC must be unanimously agreed by all 3 core partners subject to the duty of the police to comply with Article 2 ECHR and/or to prevent harm in the context of which the police must be able to exercise their discretion. Every effort will be made to seek advice from the Chair and Vice Chair of the DEC.

### **DEC Advice & the law**

5. It is not the DEC's role to provide legal advice and the process in these Terms of Reference assumes that legal counsel will be independently sought by ecda as appropriate. Ecda will be responsible for internal confidentiality management, data protection and information management governance and processes including;

- a. The appointment of someone to act as the Data Protection Officer

- b. Seeking independent specialist legal or data protection advice
- c. Conducting its own data protection impact statements and assessments on proposed projects before such projects are considered by the DEC.
- d. There will be a clear statement with any project proposals put before the DEC making it clear that ecda has received advice that the proposal is legally compliant.
- e. It will be ecda's responsibility to ensure activities comply with any other regulator and/or UK government body inspection regime (whether relating to investigatory powers or otherwise). The ecda partners are all required to answer any regulatory query in relation to the DEC, in accordance with their legal duties. The DEC will, of course, consider relevant legal issues, where identified, as part of its analysis of the ethics issues being considered.

6. Subject to obligations of confidentiality ecda will not hold members liable for the advice they provide in their capacity as members of the DEC. Members will be expected to use all reasonable endeavours to provide advice to the best of their ability and with reasonable care, skill and diligence.

7. Members will be under a strict obligation to maintain the confidentiality of matters discussed that are deliberately not disclosed as part of the DEC records, but members should be aware their advice may, subject to applicable law and applicable legal procedures, be disclosed in legal proceedings or regulatory action involving ecda or the ecda core partners.

8. The DEC will act independently and free of bias, including political bias.

### **Membership of the DEC**

#### **Members' skills**

9. The DEC will seek to attract members with relevant skills, knowledge and experience as well as lay members. The sort of skills that are considered to be relevant are:

Data Science

Human rights knowledge/experience

Civil/public service policy

Police or public service ethics/data ethics/moral philosophy

Social Policy

Information Technology

Change/Organisational Development

Artificial Intelligence

Information Governance

Sociology/philosophy/social sciences

Research and academic experience

Membership will also include:

Lay members - residents of Essex, who need not have any specific qualifications or areas of expertise. These members will bring value to the work of the DEC as residents of the county and will especially assist in identifying any issues of discrimination, privacy and other ethical issues to the group from a lay perspective. The DEC will actively seek a membership that reflects the county and its citizens in terms of age, gender, ethnicity and religion.

The head of ecda or their nominated deputy will attend all DEC meetings as an observer and to answer questions.

If considered appropriate by the head of ecda, an ecda project lead will inform and brief the DEC on ecda's interest in a project under consideration. They will advise on operational matters, such as how certain data sets are collected in practice, organisational priorities or other relevant matters such as threat, harm, risk and the rationale for proposing certain questions or projects for ecda.

Neither the head of ecda nor the project manager will take a substantive part in discussions and they will not interfere with the DEC's independence.

Secretariat support will be provided by a senior member of the ecda team.

In addition, the Chair may invite the Information Commissioners Office to attend meetings of the DEC on an ad-hoc basis if they feel that their views and advice would be of benefit.

### **Period of membership**

10. Members will be appointed for three years. Members who have served a three-year term may be appointed for a second three- year term under the same process as the initial appointment. Individuals will not serve more than two terms of three years, although ecda reserves the right to extend the term of individual members for a limited period when needed to ensure continuity and to provide support to new members. For example, allowing a period for an outgoing Chair to guide new members through the DEC's processes.

11. The senior representative of ecda may change more frequently due to the typical length of time served in any one position by senior officers or appointees. Should an officer or appointee not be able to sit on the DEC for the full three- year term, ecda will replace them with another senior representative for the remainder of the current term.

### **Membership vetting and Contracts**

12. Members will need to be vetted due to the confidential nature of information and/or data being considered from time to time. The vetting level will be agreed by ecda and vetting will be undertaken by Essex Police. Members will be appointed as volunteers for Essex Police and will be subject to the standard Essex Police Volunteers Contract.

### **Appointing the Chair and Vice Chair**

13. The Chair and Vice Chair of the DEC shall be appointed on behalf of the ecda Sponsors Board, the appointments being agreed by all 3 core ecda partners. The Chair and Vice Chair may not in any way involved in the day to day work of ecda, or employed by any of the 3 core partners in order to preserve the independence of the DEC. The Chair and Vice Chair shall be able to invite other relevant experts to meetings to advise the members, provided any invitees agree to maintain the confidentiality of matters discussed, and operate according to these terms of reference.

### **Members' Appointment**

14. The Head of ecda will approve DEC appoints on behalf of the ecda Sponsors Board will appoint the DEC and all 3 ecda core partners must agree the appointment of all members and the decision to appoint must be unanimous.

15. Members may be directly approached and appointed based on their having appropriate experience, subject to an application and interview process. The interview panel will normally have one member from each of the 3 core ecda partners. All ecda DEC appointments and opportunities will be published in such a way as to ensure that the opportunity is canvassed across the county through local and community groups.

16. While at all times complying with equality laws of England and Wales, ecda will use all reasonable endeavours to appoint DEC members that are, so far as is possible, representative of the diverse communities of Essex. Ecda's commitment to promote diversity on the DEC will be consistent with the public sector duty under the Equality Act 2010 (the "Act") to "encourage people with protected characteristics to participate in public life..." and provisions under the Act regarding positive action.

17. All applicants for membership will need to disclose any conflicts of interest before being appointed, and after their appointment, and to disclose any conflicts at the time they arise where applicable. Upon joining the DEC, a member must absolve themselves from participating in the discussions of the DEC where they have a conflict of interest.

18. Ecda reserves the right to remove members by agreement if, acting reasonably, they deem such a removal to be in the public interest. Any such removal will be justified in writing to the individual, to help ensure there is transparency and integrity in the decision. Ecda may agree any such additional rules or codes of conduct from time to time governing the conduct and removal of DEC members.

### **Benefits of membership**

19. Membership of the DEC will not be remunerated, to preserve decision making independence.

20. Reasonable and necessary expenses will be reimbursed. When deciding what is reasonable, Ecda will give due consideration to the personal circumstances of the applicable member so that expenses do not serve as a social barrier to their membership.

### **Website biography**

21. Appointed members will have a short biography placed on the ecda website and on the website of the 3 core partners, so that the public can access information on the committee's membership.

### **Meetings and records**

#### **Timing of meetings**

22. The DEC will meet privately to discuss the ethical issues arising regarding specific ecda projects. Meetings will usually take place between 4 and 6 times a year, and dates will be set with every effort to ensure maximum attendance and sufficient prior notice. Ecda will consider the personal circumstances of the members to try to avoid choosing times that act as a social barrier to their membership. Reasonable expenses will be reimbursed. Meetings will be held either in person or using video conferencing software.

23. Ecda or the DEC may request a meeting outside of the normal schedule if it is deemed necessary to provide advice for a particular project in a timely fashion. In the event of particular topics and projects requiring further or more regular consideration, the DEC may agree to form a 'task and finish' sub- group for this purpose. Such groups must be agreed by the Chair and Vice Chair of the DEC and by the ecda senior representative.

24. For urgent advice or advice on emerging data project proposals DEC members may agree to a reasonable request from ecda for an additional meeting. Alternatively, some projects may be put through a simpler process, engaging the DEC via email to seek initial views. This simpler process will allow projects that need further work, or which cause immediate issues to be referred back without the need to go through the full Committee process. Meetings using this process must include the Chair and/or Vice Chair.

### **Minutes of meetings**

25. Minutes or a record of decisions and actions, as appropriate, will be taken at all meetings, and records will be kept of all minutes, briefing papers and advice provided by the DEC (together the "Records"). The ecda Core Group will be responsible for providing this support for the DEC through the Secretariat function.

26. All Records will be provided to the members of the boards involved in the governance of ecda. All or part of such Records may be redacted by ecda at the direction and reasonable discretion of the DEC, ecda, and/or any one of the 3 ecda core partners for the purpose of maintaining confidentiality such as in relation to commercial confidentiality, operational sensitivity and personal data. The minutes of meetings will be made publicly available to ensure transparency.

### **Quorum**

27. DEC meetings will be considered quorate when six or more non ecda members are present provided that either the Chair or Vice Chair are present.

28. Substitutes will not be permitted to attend meetings, unless by invitation of the Chair or Vice Chair.

29. In order for any expedited proposal to be formally recommended by agreement over correspondence (e.g. by email), a sufficient number and category of members would need to respond in accordance with a quorate meeting.

### **Secretariat**

30. Ecda will appoint an ecda Secretariat to organise the meetings and help administer the briefing papers for the DEC.

31. The ecda Secretariat will ensure there is consistency in the format of briefing papers and the advice provided by the DEC.

32. Briefing papers which will include details of the project proposals submitted by ecda and any legal or ethical advice already received as well as any statutory or other assessments already completed. Papers will be to DEC members at least one week before scheduled meetings, or sooner where possible, to ensure members have enough time to consider the content of the papers.

33. The Secretariat may provide further procedural rules from time to time, with the agreement of the 3 core ecda partners, to ensure the smooth running of the DEC and advisory process. Such rules must be formally agreed by the ecda Partnership Board prior to release by the Secretariat.

## **Engaging the DEC**

### **Format of meetings**

34. At the beginning of every meeting representatives from ecda shall be given an opportunity to present the project proposal(s). Normally the DEC secretary and the Head of ecda will remain for the duration of the meeting with other ecda representatives who are attending leaving at this point but the Chair or Vice Chair may invite any other the ecda representatives or specialists to stay in order to answer any questions for a period of time, or for the full meeting, at their discretion. All meetings, other than urgent meetings following a simplified process, will follow a similar format allowing the DEC to be briefed on, and to discuss, the problem the project is seeking to solve as well as the project itself. The senior ecda member fulfilling the secretariat function will remain to take the minutes/records of decisions and actions (as appropriate), but may not participate in the discussions, although may answer questions when asked.

### **The Process**

35. In the ordinary course of business, the process for engaging the DEC is as follows:

a) Following internal ecda governance a proposed data project will be presented to the DEC. In preparing a data project proposal, ecda will have undertaken a review of the available data (e.g. data discovery exercise).

b) If approved through ecda governance all proposed ecda projects will go through the DEC, and the DEC will consider the briefing papers and provide advice to ecda. All briefing papers and presentations to the DEC will use plain English and will refrain from the use of jargon and acronyms. Where necessary a glossary of terms will be included.

c) Ecda shall have regard to the advice provided by the DEC. However, Ecda will not be bound by the DEC's advice. But in the event that ecda decides not to follow the advice of the DEC, the decision not to do so must be agreed by all 3 of the core partners through the correct ecda governance process. If the decision is made to follow the DEC's advice contrary to the wishes of one, or any, of the 3 core partners, then the partner(s) concerned may abstain from the project in question without contributing their data. However, ecda partners must be cognisant of the implications for public trust and confidence in the event that they do not follow the advice of the DEC or take their concerns into account. It is anticipated that such decisions will be made by the ecda Sponsors Board in association with advice from the ecda Core Group.

d) Where ecda do not follow the advice of the DEC, ecda will advise the DEC and will provide the reasons for the decision as soon as is practicable, unless doing so would undermine legitimate operational secrecy (including matters relevant to national security) or which should be kept confidential in accordance with principles of public law.

### **Advice process**



36. Once notice of the meeting has been provided and the date scheduled, the DEC will consider the ecda's proposed project outlined in the briefing papers, including the methodology being adopted, and will provide advice in writing.

37. The DEC's advice will be established by consensus, but any member has the right to be recorded in the meeting minutes as dissenting with the majority view of the DEC.

38. At each stage of the DEC's analysis (i.e. considering the initial project proposal; further reviewing the proposal with further details/amendments, implementation, and/or the success of any outcomes arising from implementing the project findings), it will issue written advice to ecda explaining its position and will confirm that the DEC:

a) It advises approving the project;

b) It advises approving the project with minor amendments;

c) It advises approving the project with major amendments;

d) It advises rejecting the project;

e) It requests more information from ecda in order to be able to advise; or

f) So far as it relates to analysing the outcomes of an actioned policy or strategy arising from ecda's research it advises on a continued or changed course of direction (e.g. if serious problems have been identified necessitating stopping the intervention or encouraging further implementation of the intervention based on evidence of positive outcomes).

The decision as to the approval, rejection, and requirements for further information will be given at the committee's meeting, virtual or otherwise, following a majority vote with the Chair having the casting vote in the event of an impasse. The advice will be confirmed in writing by the Chair and/or the Vice Chair and circulated to committee members within 3 working days of the meeting taking place. Members will then have a further 3 working days to make further comments to allow sufficient time for reflection. At the end of this period members must confirm or amend their vote in writing.

In the event that operational requirements or public interest considerations are agreed by ecda to render this cooling off period impractical, the vote on the day can be accepted as an interim position.

39. Post project the DEC will also be given the opportunity to consider:

a) The proposed policies and/or operational strategies considered for interventions arising from the findings of the project/analysis; and

b) Whether or not any actioned policies and/or operational strategies were successful at achieving the stated objectives and/or an assessment of the public benefit or harm caused by such.

40. The DEC will also be given an opportunity to review any proposed changes to the applicable project to consider the impact on the ethics issues.

#### **Publication of briefing papers and advice**

41. Minutes of DEC meetings and/or the record of decisions and actions as kept will be made publicly available to ensure transparency, accountability and to maintain public trust and confidence.

42. Information relating to the advice and the decisions of the DEC will be published on appropriate websites.

43. The ecda sponsors retain the right to redact information contained in the minutes in the interests of national security if necessary or to prevent the disclosure of very sensitive information in the public interest.

44. Note that these Terms of Reference (as may be amended from time to time) will also be made available on a page dedicated to the DEC on appropriate websites.

45. At the end of calendar year, with the support of the Secretariat under the guidance of the Chair and Vice Chair, the DEC will publish an annual statement outlining the work of the committee, save for those elements to be kept confidential pursuant to these Terms of Reference. Where applicable, the annual statement will include the ratio of non-disclosed to disclosed advice provided by the committee for the purpose of transparency.

46. Ecda will be given an opportunity to consider and scrutinise each annual statement.

### **Principles**

47. Ecda understands that what counts as ethically right or moral can be ambiguous and open to debate and disagreement, and that just because something is legal it does not necessarily follow that it is ethical. Members of the DEC are expected to recognise this distinction, where relevant, when formulating their advice. What is or is not deemed ethical will often involve a complex analysis with no clear-cut answers or obvious solutions and members will be encouraged to bring their individual perspective to all issues considered by the group. Nevertheless, ecda and the 3 core partners are under a duty to make decisions that are in the public interest and as such they require support in turning the outcome of theoretical moral debates into meaningful actions. Appreciating that ecda operations across 3 different organisations, the DEC is tasked with using its expertise to provide meaningful pragmatic advice that will help ecda reach ethical decisions in how to use data, data analytics and artificial intelligence to meet the objectives outlined in paragraph 1. The DEC is established to bring different people together, with different perspectives and expertise, to conduct a thorough ethical analysis and provide practical and independent advice.

48. To that end, in reviewing project and policy proposals, the DEC will provide ecda with advice having considered similar principles underlying the ecda Data Ethics Framework and the ALGOCARE Framework as per Appendix 2 and 3 respectively.

49. The DEC will of course consider these principles in light of the need to preserve ecda's operational independence and legitimate need to maintain operational secrecy on a case by case basis.

### **Key questions**

50. DEC members will be selected on the basis of the details contained in section 9 of the terms of reference and on lay members are expected to have sufficient experience to be able to identify pertinent questions when assessing the ethics of a specific project proposal.

51. Questions the DEC will want to consider will vary from project to project and give rise to different issues to be considered. Equally, the questions will vary in accordance with the stage at particular project is being considered by the group. E.g. The proposal stage suggested policy or operations as a result of the findings or an analysis of an operation's outcomes.

52. Notwithstanding the existing expertise members will bring, the DEC will be invited to consider the following non-exhaustive list of questions as applicable or appropriate from time to time:

- a) What is the purpose of the data analysis?
- b) What kind of data will be used and to what degree will it be aggregated or anonymised?
- c) How reliable is the data including?
  - i. How will the data be collected?
  - ii. What is the identified population it is collected from and does it involve specific demographics or vulnerable groups (e.g. victims of crime, vulnerable adults or children, prisoners)?
  - iii. How old is it?
  - iv. Who collected it?
  - v. How large is the sample?
  - vi. Does the data contain any biases by virtue of how it was collected?
  - vii. Is there inaccurate or missing data?
- d) What are the details of the statistical/research methodology being used?
- e) Will anyone's human rights, including their right to privacy be engaged?
- f) Will anyone be discriminated against?
- g) Is the proposed project necessary and proportionate (e.g. is the analysis a means of meeting a pressing social need and/or is the use of personal data, where applicable, proportionate?)
- h) How will the public benefit from the specific data project?
- i) How intrusive (i.e. sensitive personal data?) and identifiable is the data being looked at?
- j) How targeted is the use of data and will it target specific individuals?
- k) Are automated processes involved, and what are the risks in this case if there is limited or no human oversight?
- l) What are the risks of individuals or groups being affected negatively by the resulting use of the analysis for the project?
- m) How compatible is the proposed use of data with the reason it was originally collected).Is the legal basis for the use of the data in the project, and for stated purposes, clearly articulated?
- n) How open is ECDA about the project and methodology employed?
- o) How much accountability, governance and oversight is there throughout the project, including level of seniority?
- p) How secure is the data being used, including the findings?
- q) Is there a fair balance between privacy and the perceived benefits of the project?
- r) Has there been any stakeholder engagement?

s) Is there a communications strategy regarding how research findings, implications for operations and monitoring (including matters of controversy and how this relates to matters of public confidence in policing) will be communicated to ECDA partners, key stakeholders and the public?

t) Were policy or operational proposals made as a result of the findings?

i. Appropriately substantiated by the project or is further research required to justify proposals?

ii. Proportionate, necessary and in pursuit of a legitimate purpose?

iii. Entail appropriate outcome monitoring and impact measurement mechanisms/plans?

iv. Punitive or supportive and preventative?

u) Is there evidence of positive and/or negative outcomes arising from an implementation of operational proposals arising from a project's findings? If so:

v) How have these outcomes been measured and is the impact measurement (including consideration of impact on equality) scientifically robust?

w) What steps should be taken to remedy identified problems or improve outcomes, including whether or not the implementation should be expanded, suspended or stopped?

53. These Terms of Reference are not intended to be overly prescriptive. While members will be invited to consider the principles and proposed questions above, members should not feel constrained by them. For instance, where members have additional questions or concerns, they should feel free to raise them, and members should feel free to discount certain questions or aspects of principles where they consider them irrelevant or not to apply to the applicable project.

54. Where specific skills and knowledge are considered necessary for members of the DEC e.g. a basic knowledge of the General Data Protection Regulations or the remit of the Information Commissioners Office, ecda should consider the provision of training.

### **Terms of Reference review**

56. Ecda may amend these Terms of Reference by agreement of the Sponsors Board, and the DEC can propose amendments for consideration.

57. In the ordinary course of business, these Terms of Reference will be reviewed annually to consider whether amendments should be made to reflect relevant technological, legal and policy changes.

59. The DEC may also request a review of the Terms of Reference at any time.

## Appendix 1 – Definitions & Key Terms

ecda	The Essex Centre for Data Analytics, a partnership venture between Essex County Council, Essex Police and the University of Essex
DEC	Data Ethics Committee
Article 2 ECHR	Article 2 of the European Convention on Human Rights – ‘Right to Life’
General Data Protection Regulations	GDPR – EU Regulation Implemented in May 2018 which addresses privacy and data protection of individuals citizens of EU and EEA, and transfer of personal data outside of EU and EEA
Data Protection Officer	As per GDPR regulations, organisations carrying out processing of personal data are required to appoint DPO. A Data Protection Officer will maintain and demonstrate compliance, provide advice and act as subject matter expert
Personal Data	Personal data includes information relating to natural persons who: can be identified or who are identifiable, directly from the information in question; or who can be indirectly identified from that information in combination with other information
Sensitive Personal Data	Data concerning an individual’s: race; ethnic origin; politics; religion; trade union membership; genetics; biometrics (where used for ID purposes); health; sex life; or sexual orientation
ecda Sponsors / Core Partners	Sponsors at the 3 partner organisations (Chief Constable at Police, Chief Executive of the Council, and Chancellor of the University)
Sponsors Board	Bi-monthly meeting of the 3 Sponsors and representatives from the partner organisations
ecda Core Group	Delivery Team members from 3 partner organisations
ALGOCARE Framework	A decision-making framework for the deployment of algorithmic assessment tools in the policing context

**Appendix 2 – ecda Data Ethics Framework**

DMCS	ONS	Combined	ECDA Data Ethics Framework
<p><b>Start with clear user need and public benefit</b></p> <p>Using data in more innovative ways has the potential to transform how public services are delivered. We must always be clear about what we are trying to achieve for users - both citizens and public servants.</p>	<p>The use of data has clear benefits for users and serves the public good.</p> <p>The views of the public are considered in light of the data used and the perceived benefits of the research.</p>	<p><b>The use of data has clear benefits for users and serves the public good,</b> therefore we must always be clear about what we are trying to achieve for users - both citizens and public servants. Also that the views of the public are considered in light of the data used and the perceived benefits of the research.</p>	<p><b>The use of data has clear benefits for users and serves the public good,</b> therefore we must always be clear about what we are trying to achieve for users - both citizens and public servants. Also that the views of the public are considered in light of the data used and the perceived benefits of the research. Every effort must be made to ensure that benefits and public good are not to the detriment of individuals and groups especially through unintended consequences, data accuracy or bias.</p>
<p><b>Be aware of relevant legislation and codes of practice</b></p> <p>You must have an understanding of the relevant laws and codes of practice that relate to the use of data. When in doubt, you must consult relevant experts.</p>	<p>Data used and methods employed are consistent with legal requirements such as the Data Protection Act, the Human Rights Act, the Statistics and Registration Service Act and the common law duty of confidence.</p>	<p><b>Be aware of relevant legislation and codes of practice,</b> you must have an understanding of the relevant laws and codes of practice that relate to the use of data. When in doubt, you must consult relevant experts. Data used and methods employed are consistent with legal requirements such as the Data Protection Act, the Human Rights Act, the Statistics and Registration Service Act and the common law duty of confidence.</p>	<p><b>Be aware of relevant legislation and codes of practice,</b> you must have an understanding of the relevant laws and codes of practice that relate to the use of data. When in doubt, you must consult relevant experts. Data used and methods employed are consistent with legal requirements such as the Data Protection Act, the Human Rights Act, the Statistics and Registration Service Act and the common law duty of confidence. The importance of consent and legitimacy must also be considered, and the cross over between ethics and the law must be taken into account and considered. All terms used must be explained and defined.</p>

<p><b>Understand the limitations of the data</b></p> <p>Data used to inform policy and service design in government must be well understood. It is essential to consider the limitations of data when assessing if it is appropriate to use it for a user need.</p>	<p>The risks and limits of new technologies are considered and there is sufficient human oversight so that methods employed are consistent with recognised standards of integrity and quality.</p>	<p><b>Understand the limitations of the data,</b> data used to inform policy and service design in government must be well understood. It is essential to consider the limitations of data when assessing if it is appropriate to use it for a user need The risks and limits of new technologies are considered and there is sufficient human oversight so that methods employed are consistent with recognised standards of integrity and quality.</p>	<p><b>Understand the limitations of the data,</b> data used to inform policy and service design in government must be well understood. It is essential to consider the limitations of data when assessing if it is appropriate to use it for a user need .The risks and limits of new technologies are considered and there is sufficient human oversight so that methods employed are consistent with recognised standards of integrity and quality. Governance and oversight must be a key part of the design and process with external scrutiny and challenge being key. Risks must be clearly considered and articulated, with particular emphasis on the impact of aggregation across agencies and partners.</p>
<p><b>Use data that is proportionate to the user need</b></p> <p>The use of data must be proportionate to the user need. You must use the minimum data necessary to achieve the desired outcome.</p>		<p><b>Use data that is proportionate to the user need</b></p> <p>The use of data must be proportionate to the user need. You must use the minimum data necessary to achieve the desired outcome.</p>	<p><b>Use data that is proportionate to the user need</b></p> <p>The use of data must be proportionate to the user need. You must use the minimum data necessary to achieve the desired outcome. Anonymization must be considered if possible, especially in trials and early product iterations.</p>
<p><b>Ensure robust practices and work within your skillset</b></p> <p>Insights from new technology are only as good as the data and practices used to create</p>		<p><b>Ensure robust practices and work within your skillset</b></p> <p>Insights from new technology are only as good as the data and practices used to create them. You must</p>	<p><b>Ensure robust practices and work within your skillset</b></p> <p>Insights from new technology are only as good as the data and practices used to create them. You must work</p>

<p>them. You must work within your skillset recognising where you do not have the skills or experience to use a particular approach or tool to a high standard.</p>		<p>work within your skillset recognising where you do not have the skills or experience to use a particular approach or tool to a high standard.</p>	<p>within your skillset recognising where you do not have the skills or experience to use a particular approach or tool to a high standard. Particular attention must be paid to the provenance and evidential requirements.</p>
<p><b>Make your work transparent and be accountable</b></p> <p>You should be transparent about the tools, data and algorithms you used to conduct your work, working in the open where possible. This allows other researchers to scrutinise your findings and citizens to understand the new types of work we are doing.</p>	<p>The access, use and sharing of data is transparent, and is communicated clearly and accessibly to the public.</p>	<p><b>Make your work transparent and be accountable</b>, you should be transparent about the tools, data and algorithms you used to conduct your work, working in the open where possible. This allows other researchers to scrutinise your findings and citizens to understand the new types of work we are doing. The access, use and sharing of data is transparent, and is communicated clearly and accessibly to the public.</p>	<p><b>Make your work transparent and be accountable</b>, you should be transparent about the tools, data and algorithms you used to conduct your work, working in the open where possible. This allows other researchers to scrutinise your findings and citizens to understand the new types of work we are doing. The access, use and sharing of data is transparent, and is communicated clearly and accessibly to the public. Engagement with the community and public must be part of the data strategy, with the groups, methodology and outcome-based action clearly identified from the start.</p>
<p><b>Embed data use responsibly</b></p> <p>It is essential that there is a plan to make sure insights from data are used responsibly. This means that both development and implementation teams understand how findings and data models should be used and monitored with a</p>	<p>The data subject's identity (whether person or organisation) is protected, information is kept confidential and secure, and the issue of consent is considered appropriately.</p>	<p><b>Embed data use responsibly</b>; it is essential that there is a plan to make sure insights from data are used responsibly. This means that both development and implementation teams understand how findings and data models should be used and monitored with a robust evaluation plan. The data subject's identity</p>	<p><b>Embed data use responsibly</b>; it is essential that there is a plan to make sure insights from data are used responsibly. This means that both development and implementation teams understand how findings and data models should be used and monitored with a robust evaluation plan. The data subject's identity (whether person or organisation) is protected, information is kept</p>



robust evaluation plan.		(whether person or organisation) is protected, information is kept confidential and secure, and the issue of consent is considered appropriately.	confidential and secure, and the issue of consent is considered appropriately.
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### Appendix 3 – ALGOCARE Framework

Another tool, which can be used in association with the ethics framework, is the ALGOCARE framework developed for used by Durham Police in relation to their Harm and Risk Tool (HART). The model asks a series of questions to be asked regarding the use of an algorithm to encourage thinking and to driver better decisions. Nevertheless, it is not a decision tree and does not take you down different routes according to each answer.

Fig. 1

<p style="text-align: center;"><i>Algorithms in Policing – Take ALGO-CARE™</i></p> <p style="text-align: center;"><i>A proposed decision-making framework for the deployment of algorithmic assessment tools in the policing context</i></p>		
<b>A</b>	<b>Advisory</b>	Is the assessment made by the algorithm used in an advisory capacity? Does a human officer retain decision-making discretion? What other decision-making by human officers will add objectivity to the decisions (partly) based on the algorithm?
<b>L</b>	<b>Lawful</b>	On a case-by-case basis, what is the policing purpose justifying the use of algorithm, both its means and ends? Is the potential interference with the privacy of individuals necessary and proportionate for legitimate policing purposes? In what way will the tool improve the current system and is this demonstrable? Are the data processed by the algorithm lawfully obtained, processed and retained, according to a genuine necessity with a rational connection to a policing aim? Is the operation of the tool compliant with national guidance?
<b>G</b>	<b>Granularity</b>	Does the algorithm make suggestions at the right level of detail/granularity, given the purpose of the algorithm and the nature of the data processed? Do the benefits outweigh any technological or data quality uncertainties or gaps? Is the provenance and quality of the data sufficiently sound? Consider how often the data should be refreshed. If the tool takes a precautionary approach towards false negatives, consider the justifications for this.
<b>O</b>	<b>Ownership</b>	Who owns the algorithm and the data analysed? Does the force need rights to access, use and amend the source code and data analysed? How will the tool be maintained and updated? Are there any contractual or other restrictions which might limit accountability or evaluation? How will the operation of the algorithm kept secure?
<b>C</b>	<b>Challengeable</b>	What are the post-implementation oversight and audit mechanisms e.g. to identify any bias? Where an algorithmic tool informs criminal justice disposals, how are individuals notified of its use (as appropriate in the context of the tool’s operation and purpose)?
<b>A</b>	<b>Accuracy</b>	Does the specification match the policing aim and decision policy? Can the stated accuracy of the algorithm be validated reasonably periodically? Can the percentage of false positives/negatives be justified? How was this method chosen as opposed to other available methods? What are the consequences of inaccurate forecasts? Does this represent an acceptable risk (in terms of both likelihood and impact)? Is the algorithmic tool deployed by those with appropriate expertise?

<b>R</b>	<b>Responsible</b>	Would the operation of the algorithm be considered fair? Is the use of the algorithm transparent (taking account of the context of its use), accountable and placed under review alongside other IT developments in policing? Would it be considered to be for the public interest and ethical?
<b>E</b>	<b>Explainable</b>	Is appropriate information available about the decision-making rule(s) and the impact that each factor has on the final score or outcome (in a similar way to a gravity matrix)? Is the force able to access and deploy a data science expert to explain and justify the algorithmic tool (in a similar way to an expert forensic pathologist)?

**Fig. 2**

<p><i>Brief explanatory notes and additional considerations</i></p> <p><i>The Algorithms in Policing – Take ALGO-CARE™ framework is intended to provide guidance for the use of risk-assessment, predictive, forecasting, classification, decision-making and assistive policing tools which incorporate algorithmic machine learning methods and which may impact individuals on a micro or macro level</i></p>		
<b>A</b>	<b>Advisory</b>	Care should be taken to ensure that an algorithm is not inappropriately fettering an officer’s discretion, as natural justice and procedural fairness claims may well arise. Consider if supposedly advisory algorithmic assessments are in practice having undue influence. If it is proposed that an algorithmic decision be automated and determinative, is this justified by the factors below? Data protection rights in regard to automated decisions may then apply.
<b>L</b>	<b>Lawful</b>	The algorithm’s proposed functions, application, individual effect and use of datasets (police-held data and third party data) should be considered against necessity, proportionality and data minimisation principles, in order to inform a ‘go/no-go’ decision. In relation to tools that may inform criminal justice disposals, regard should be given to the duty to give reasons.
<b>G</b>	<b>Granularity</b>	Consideration should be given to common problems in data analysis, such as those relating to the meaning of data, compatibility of data from disparate sources, missing data and inferencing. Do forces know how much averaging or blurring has already been applied to inputs (e.g. postcode area averages)?
<b>O</b>	<b>Ownership</b>	Consider intellectual property ownership, maintenance of the tool and whether open source algorithms should be the default. When drafting procurement contracts with third party software suppliers (commercial or academic), require disclosure of the algorithmic workings in a way that would facilitate investigation by a third party in an adversarial context if necessary. Ensure the force has appropriate rights to use, amend and disclose the tool and any third-party data. Require the supplier to provide an ‘expert’ witness/evidence of the tool’s operation if required by the force.
<b>C</b>	<b>Challengeable</b>	The results of the analysis should be applied in the context of appropriate professional codes and regulations. Consider whether the application of the algorithm requires information to be given to the individual and/or legal advisor. Regular validation and recalibration of the system should be based on publicly observable (unless non-disclosable for policing/national security reasons) scoring rules.

<b>A</b>	<b>Accuracy</b>	How are results checked for accuracy, and how is historic accuracy fed back into the algorithm for the future? Can forces understand how inaccurate or out-of-date input data affects the result?
<b>R</b>	<b>Responsible</b>	It is recommended that ethical considerations, such as consideration of the public good and moral principles (so spanning wider concerns than legal compliance) are factored into the deployment decision-making process. Administrative arrangements such as an ethical review committee incorporating independent members could be established for such a purpose (such as <u>Cleveland &amp; Durham Joint External Ethics Committee</u> or <u>NSDEC</u> ).
<b>E</b>	<b>Explainable</b>	The latest methods of interpretable and accountable machine learning systems should be considered and incorporated into the specification as appropriate. This is particularly important if considering deployment of 'black box' algorithms, where inputs and outputs are viewable but internal workings are opaque (the rule emerges from the data analysis undertaken). Has the relevant Policing & Crime Commissioner been briefed appropriately?

# The Essex Centre for Data Analytics Data Ethics Committee (DEC)

An Independent Advisory Board for ecda Projects

## DEC Process

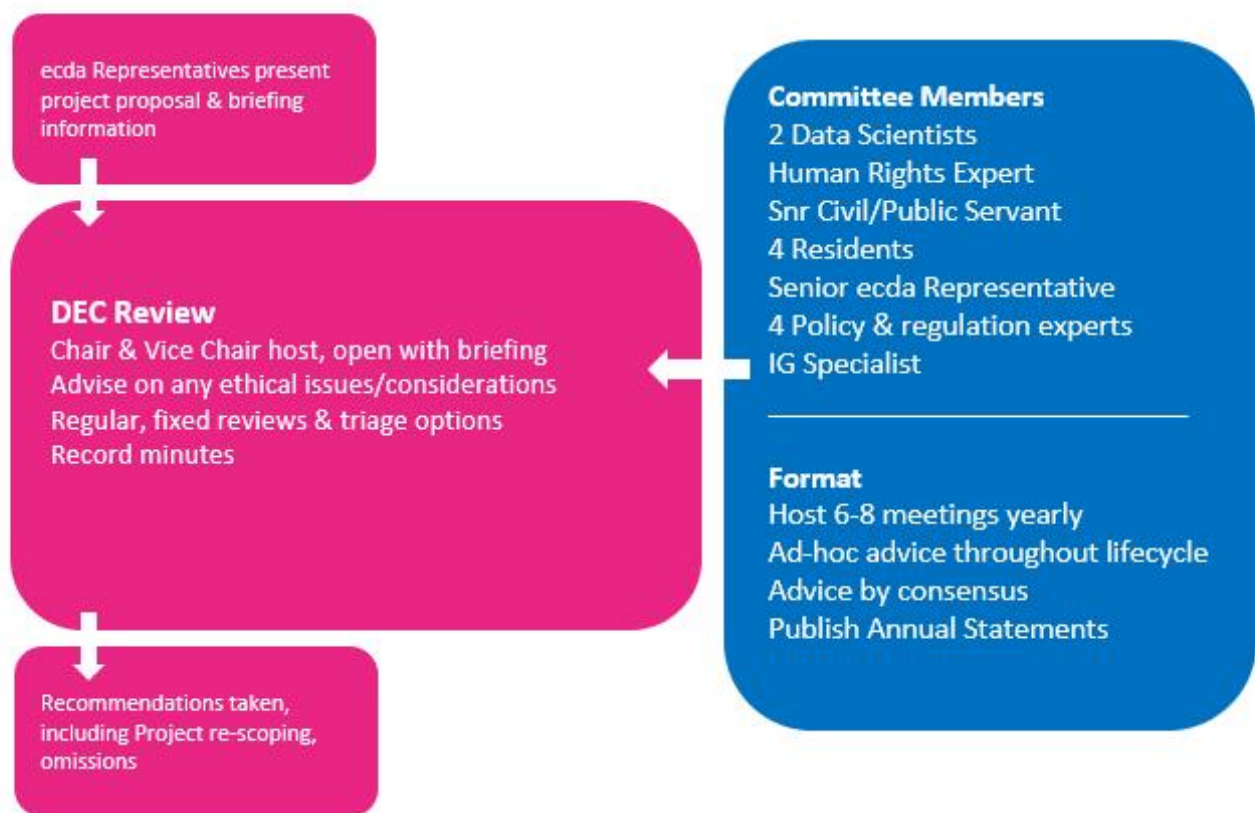


# The Essex Centre for Data Analytics

## Data Ethics Committee (DEC)

An Independent Advisory Board for ecda Projects

### DEC Engagement & Format





# The Essex Centre for Data Analytics

## Data Ethics Committee (DEC)

An Independent Advisory Board for ecda Projects



### DEC Ethics Framework & Checklist

	0	1	2	3	4	5
<b>1. Start with clear user need and public benefit</b>	User need is not well defined					User need is clearly defined
Description of the user need with supporting evidence						
<b>2. Be aware of relevant legislation and codes of practice</b>	Needs clarification or expert input					Relevant laws are well understood
List the pieces of legislation, codes of practice and guidance that apply to your project.						
<b>3. Use data that is proportionate to the user need</b>	Reuse not proportionate					Reuse of data is clearly proportionate to achieve user need
Describe how the data being used is proportional to the user need						
<b>4. Understand the limitations of the data</b>	Unreliable, unsuitable data					Data is representative and accurate
Identify the potential limitations of the data source(s) and how they are being mitigated						
<b>5. Use robust practices and work within your skillset</b>	Needs further expert input					Methodologies clearly designed and understood
Explain the relevant expertise and approaches that are being employed to maximise the efficacy of the project						
<b>6. Make your work transparent and be accountable</b>	No scrutiny or peer review available					Oversight built in through the cycle of project
Describe how you have considered making your work transparent and accountable						
<b>7. Embed data use responsibly</b>	No ongoing plan determined					Evaluation plan developed and resource in place to deliver it
Describe the steps taken to ensure any new model, policy or service is managed responsibly						