CREATIVE INFORMATICS ETHICS STATEMENT

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PREAMBLE

Creative Informatics has been an ambitious research and development programme based in Edinburgh, which aimed to bring the city's world-class creative industries and tech sector together, providing funding and development opportunities that enabled creative individuals and organisations to explore how data could be used to drive ground-breaking new products, businesses and experiences. Creative Informatics has nurtured local talent through funding programmes and regular events that supported Edinburgh's creative industries to do inspiring things with data. This work has been supported by research into the cluster and emerging data driven creative practices.

The Creative Informatics Ethics Statement was created to capture the programme's position on the values and priorities for the work undertaken and supported, and forms part of our work to encourage best practices and thoughtful reflection on work with data and new technologies in the creative industries. This Ethics Statement provides guidance for those working in and around the creative industries, or with data more broadly in a creative context, and should be used as a tool for reflection with prompts to consider, document, and review approaches and practices, and as a way to encourage positive engagement with legal and societal responsibilities.

In the Creative Informatics programme we have used this ethics process as a required component of forming contracts with companies selected for R&D grant funding, with participants required to complete and submit the form for review before the signing of contracts. In some cases (based either on the complexity of issues raised, and/or on the preference of

participants for additional support), the review process was accompanied by further discussion, guidance, and a resubmitted version of the form prior to official sign off by the programme team.

The authors are publishing this work openly as we enthusiastically welcome reuse and remixing of the Creative Informatics Ethics Statement and welcome questions or comments that may feed into future iterations and best practices. Since the original publication of the Creative Informatics Ethics Statement (v1.3), it has been adopted by other organisations as a tool, particularly those working with creative SMEs. This updated statement (v2.0) includes a number of additions, changes and updates informed by Creative Informatics' use of this process with over 130 R&D projects, as well as feedback from wider stakeholders.

Creative Informatics has been a partnership between The University of Edinburgh, Edinburgh Napier University, Creative Edinburgh and Codebase. Creative Informatics was funded by: the Creative Industries Clusters Programme managed by the Arts & Humanities Research Council as part of the Industrial Strategy; the Scottish Funding Council; the Data Driven Innovation Programme of the Edinburgh and South East Scotland City Region Deal; and the UK Government Department for Culture, Media and Sport.

ABOUT THIS ETHICS STATEMENT

Data Ethics is a developing and changing area. Legislation in this area is also rapidly changing. If you would like to suggest anything else that this statement should be covering in its ethical approach, please do contact the team (creativeinformatics@ed.ac.uk or designinformatics@ed.ac.uk). We are also revising and update this Ethics Statement when necessary.

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INTRODUCTION

This document outlines Creative Informatics' approach to ethical practice. In the UK, there are, of course, key legal requirements that must be abided by, including the Data Protection Act 2018, intellectual property legislation, and the Equality Act 2010. Whilst this document is written in the context of the UK, comparable areas of legislation exist in most other legislative regions. Legal requirements help ensure some core ethical challenges are addressed but compliance with the law is not enough to ensure a robust ethical approach. We recommend that all those working with data and data driven technologies in the creative industries think about the ethics and integrity of their practice. We believe that responsible innovation and ethical practices will set organisations apart and offer important advantages for those who adopt them, including not only the fair and appropriate use of data but also work that is socially and environmentally responsible.

Data-Driven Innovation and technologies present incredible opportunities for the Creative Industries but they also present complex questions and risk in terms of ethical business and employment practices, environmental impacts, privacy, and moral and civic responsibilities. This document outlines key considerations, provides pointers to further resources, and provides guidance on ethics to the Creative Informatics and wider creative industries community.

WHO SHOULD USE THIS DOCUMENT

This ethics statement was originally designed for those receiving funding and support through the Creative Informatics programme, however we are aware that as a template and approach it has found wider application and been adopted by other organisations and funding programmes working with the creative industries. We believe that this updated statement (v2.0) will have particular relevance and use for both creative SMEs looking to review and reflect on their data and business practices, especially when working in new and innovative areas, as part of regular self-reflection and development; and to those who support or fund creative start-ups, SMEs and freelancers undertaking new activities with data, data-driven technologies, AI and wider digital R&D work, ideally as part of contract processes.

How To Use This Document

This ethics statement captures key questions and concepts that you should be considering to ensure your practice is ethical, and in line with best practices developed through the Creative Informatics programme's approach and ethos. The first half of the document discusses key considerations, whilst the second half is a self-led framework for you to complete as part of your own reflective process. Please note that this ethics statement is concerned specifically with data and data driven creative work, and whilst our approach covers a wide range of

ethical areas, these are all concerned with ethical issues at the intersection between data and creative practice. For more expansive ethical guidance, we would recommend reviewing broader resources (e.g <u>Scotland's Al Strategy</u>), or for more in-depth guidance on specific areas (e.g. environmental impact, modern slavery), reviewing specialist guidance and certifications (e.g. <u>B Corp Assessment, UK Government Modern Slavery Assessment Tool</u>).

This document has been designed within the context of UK legislation (at the time of writing), if you are using or adapting this approach for work in another location (including UK companies trading overseas), please do check what legislation is relevant to your own context and location. Legislation around data and technology, especially AI, is rapidly changing and we would recommend always checking that your approach is in line with current guidance and best practices.

We recommend you read this document and complete the self-review checklist at the end of the statement, ideally in a review process with an accountability partner. This could be a funder, your external board, an industry body of which you are a member, or some other similar form of external governance or advisory structure. For companies we recommend that you reflect on your project(s) against these ethical considerations, reviewing your work against the checklist for your own reference and best practice. We also recommend a six-monthly ethics review and/or that you may want to undertake the ethics review process again if you make significant changes to your product or service (e.g. feature changes, data changes, changes in the type of users or markets you work with). Make sure that this fits into your organisational structure and that a named person has ownership and reporting responsibility for this. Review the questions here, note any changes that could have ethical implications, and do get in touch with your accountability partner, or seek suitable further advice, if you have questions or need further guidance.

For supporting and funding organisations we recommend that this form and process is included as a key element in agreeing new contracts, with a review and sign off process and inclusion of the ethics checklist as an annex to contracts.

WHAT DO WE MEAN BY YOUR DATA?

In the broadest sense, your data is any kind of information you collect in order to make your products, services or experiences, including information you hold to run your business. This could include geospatial data, archival data from collections, architectural and building data, transit patterns through cities, product usage tracking, data sets you obtain from commercial partners, and more. Special consideration must be paid to personally identifiable information, which can include images or video, scans and imaging, motion tracking data (which can be personally identifiable through gait patterns etc.), text sources that discuss individuals or companies, etc. Data may also include company information of clients, collaborators, user information, etc. For more information on this, see the ICO's guide to personal information.

WHAT DO WE MEAN BY ETHICAL PRACTICES?

Whenever you build or create a new product, service, or business model you take decisions that can have ethical implications. Some of the questions you should be thinking about are:

USE OF EXISTING DATA

Where does your data come from? How was it originally collected and was that process fair and appropriate? Is it 'personal data' and in a 'special category' of data, as defined in the Data Protection Act 2018? Did (all of) the individuals represented by the data give their consent for its collection and current use? Were those individuals capable of giving informed consent? (e.g. of a suitable age and level of understanding, not pressured or coerced, not misled during the process). If the data claims to reflect a community or area, is the data reflective of who makes up that community (e.g. an appropriate representation of different genders, ethnicities etc.)? How are you storing the data? Who has access to the data and is this limited to those who truly need to have access to the data? When do you delete/destroy the data? How do you intend to use data in the future – in particular in contexts where data may be aggregated or used in more complex processing or modelling (e.g. Al)?

COLLECTING NEW DATA

Are you aware of and meeting the requirements of the relevant UK law, in particular the GDPR (General Data Protection Regulation), currently applicable in the UK through the Data Protection Act 2018, and the Privacy and Electronic Communications Regulation (2003)?

Depending on the product, service, experience, or business you are working on, you may need specialist legal advice, however there are a number of questions any business should ask itself. While they alone do not ensure legal compliance, they are a good starting point to think through some of the ethical implications of the use of personal data. You may be required to undertake Data Protection Impact Assessments (DPIAs), particularly if you are working on novel and untested technologies, and you will need to update these if your practice changes. We recommend undertaking a DPIA – whether or not you are required to - as the process can be helpful in reviewing and documenting your approach to personal data collection and use. Further practical guidance on DPIAs can be found on the Information Commissioner's Office website.

You should ask yourself in particular if your use, aggregation and processing of data is fair and appropriate for your users and/or for anyone represented in that data. Areas you should be considering include:

CONSENT AND USAGE OF DATA

Do you have a valid legal reason - which could be informed consent, though other permissions may also apply - to process personal data? Do you have a clear understanding of the purpose

for which you need the data, and a way to monitor if that purpose should change? Do your users understand what data you are collecting, for what purpose, how it might be used now and in the future? Do they understand the risks of sharing data with you, or with any third parties who they are consenting to it being shared with? Is the way you explain these things appropriate for your user groups? Do you need to process e.g. the data of people who may struggle understanding your explanation, due to age, illnesses or language barriers? Does your use of any commercial or partner data fit with appropriate agreements and shared expectations?

PRIVACY, DATA AGGREGATION AND LONG-TERM CONSIDERATIONS

Have you considered long term privacy, social or ethical implications and how you will accommodate users who change their mind about how their data can be used (including withdrawing consent for use) or want to alert you to a mistake about their data? Can they contact you easily, and do you have mechanisms in place to respond to such a request in a timely fashion? Have you considered privacy of e.g. location, behavioural data, biometric data (e.g. gait), or the impact of combining two or more datasets on the identifiability of individuals? Do you really need the data you collect, or are there less intrusive ways to achieve the same result?

DATA STORAGE AND INFORMATION SECURITY

How are you storing the data? Is it safe from both unauthorised insiders and from external attackers? How would you respond if it is compromised? Do you understand how and when you need to anonymise data? Who has access to the data and is this access limited to those who truly need to have access to it? When do you delete/destroy the data? Have you considered anonymisation and do you understand how to anonymise the data you are using/collecting? Have you considered other appropriate technological solutions to ensure data is kept safe and can only be accessed by those who need to? Do you know where the data that has been entrusted to you is at all times, and have you considered (e.g. in international collaborations, or because you rely at some stage on cloud-based hosting or services) that it may travel outside the protection of UK law? If you build a physical product that carries data on a chip, how does this affect safe recycling, resale and reuse? What will happen to the data that has been entrusted to you should your business be bought by someone else?

INCLUSIVE DESIGN

Is the design of the product, service or business you are developing inclusive of all contributors, collaborators, users, and stakeholders? Does the product or service you are offering respect the needs, dignity and privacy of your potential users, clients, and stakeholders? Does the design, functionality and experience you are/hope to be offering respect other people's cultures and backgrounds? Is it accessible to those with disabilities? Is what you offer compliant with equalities legislation? You may find the UK Government guide to making your service accessible useful in considering how you will do this. Have you reviewed your work against

guidance from the <u>Equalities and Human Rights Commission?</u> The Creative Informatics <u>Equality, Diversity, and Inclusion Policy & Action Plan 2021-23</u> serves as an example of how we addressed these issues throughout the Creative Informatics programme.

ETHICAL BUSINESS AND EMPLOYMENT PRACTICES

Does your business model or production method(s) respect others' human rights? Are workers paid appropriately for the minimum or living wage in their locality? Are contracts fair and appropriate? Are human rights of workers respected? Is your idea a platform (or will it lead to a platform) that depends on volunteered, underpaid or "gig economy" workers?

DATA ANALYTICS AND MODELLING

If you are currently, or if you are planning to undertake text and data mining, machine learning, or AI in your work with data – whether directly or through the use of third-party AI tools and platforms:

Do you have appropriate permissions for the data you plan to use either as training data, or within AI data tools, for this purpose? Have you ensured you have appropriate licensing permissions from the rights holders, and/or any relevant consent for personal data processing with these types of technologies? Are your training data sets representative of wider society and appropriately diverse? Could any part of the processing (including code adapted or reused from other appropriate sources) be deemed unfair, exclusionary or discriminatory? Does any of your data modelling or decision making reinforce existing or create new inequalities? Are you actively monitoring this on a regular basis (e.g. as part of a recommended six-monthly ethics review)?

ENVIRONMENTAL IMPACT

Have you undertaken any environmental impact assessment for your chosen technologies? Some technologies (e.g. Blockchain, large-scale data and Al work such as LLMs) have substantially greater environmental impact because of the processing power required to run them. Have you considered the future environmental impact of any goods or physical materials you create? Will they be recyclable or otherwise possible to reuse in the future? Are you able to document and track this? Do you have any other measures in place to ensure you minimise the environmental impact of your work (e.g. novel production or recycling mechanisms for physical goods)? Resources such as <u>Julie's Bicycle</u> and <u>Creative Carbon Scotland</u> can be useful in understanding your environmental impact.

SELF-ASSESSMENT OF ETHICAL IMPLICATIONS

In addition to this ethics statement and check list, we recommend reviewing the free, openaccess book chapter <u>Data Ethics in the Digital Creative Industries</u> for a comprehensive list of guidance and hands-on tools to work through ethical quandaries that small businesses and entrepreneurs in various industries face. These resources can be especially helpful in understanding emerging issues, areas you may not yet have considered, and some of the specialist considerations of particular areas of work.

This is a rapidly evolving field, so continue to monitor trustworthy sources like <u>Digital Catapult</u>, the <u>Open Data Institute</u>, and the <u>Turing Institute</u> for updated guidance in addition to government and legal sources like the <u>Information Commissioner's Office</u>, the <u>EU Ethics Guidelines for Trustworthy AI, etc.</u>

UNDERSTANDING GDPR AND PRIVACY ISSUES

The <u>Information Commissioner's Office website</u> provides excellent advice on privacy and GDPR requirements. They have a section, <u>For Organisations</u>, which specifically outlines the responsibilities of organisations (including SMEs, entrepreneurs, etc.) when working with personally identifiable information. We would recommend also reviewing any relevant Data Protection policies, codes of practice, codes of conduct, business or research ethics that may apply to your own working context. Reviewing any Privacy and Data Protection policies already in place/published as part of this ethics review process helps to ensure your approach remain compliant, consistent and thoughtful.

ALIGNING WITH ETHICAL PRACTICES AT PARTNER AND HOST ORGANISATIONS

Organisations you work with, including key strategic partners, funders, etc., may have their own codes of conduct, data protection and ethical working policies. These will sit alongside formal agreements around using their data (if that is part of your work with them). We recommend asking about these at the outset of your work and ensuring your own practice and approach is well aligned.

WHAT WILL YOU DO WHEN THINGS GO WRONG?

It is not always possible to avoid a problem. It is important that you think about what you will do to respond to an issue. Do you have appropriate internal plans and information available (e.g. risk register, disaster recovery plans)? Who do you need to contact? What mitigations do you have in place to reduce the harm when things go wrong? You may also want to have standard processes to inform users, stakeholders, and your funders of an issue. If there is a data breach you would be required to inform the Information Commissioners Office and your data subjects as quickly as possible. If anyone feels they may have been harmed, do you have procedures to mitigate and compensate them? How will you communicate and address the issue promptly?

THE BENEFITS OF AN ETHICAL APPROACH

Ethical practices are concerned with ensuring that you do no harm but being ethical in your business is not just about compliance and minimising risk, it can also mean making a real positive contribution to society. For example, you may find an opportunity or be developing applications that may not be immediately or directly commercially beneficial but may be particularly helpful for individuals or communities, which may include disadvantaged communities. Being explicit about your ethical values and how you carry these out in practice can also build trust between you and your clients and wider stakeholders, enhancing your audience engagement and building your reputation as a trustworthy provider. The brand value from your ethical approach may even have a positive impact on your potential revenues.

You and your business are part of the wider community including your local community, relevant communities of practice (e.g. the Creative Informatics community, Scottish Creative Tech community, etc.), and national and international creative and business communities. Sharing your approach, your findings, your data, your code or data models, shares the benefit of your work across this wider community. Sharing can also enhance the benefits to you and your business by leading to new collaborations, new and unforeseen uses of your idea or approach, and feedback, advice and contribution from others with valuable expertise.

We recommend considering how you can connect what you are doing to the wider community, whether that is through open sourcing your code, data, etc. or simply through engaging them in your work, acknowledging the contribution they make or have made (e.g. through testing and design processes, support, etc.), or sharing new opportunities to get involved as they arise.

CREATIVE INFORMATICS SELF-ASSESSMENT ETHICS REVIEW FORM

This form reflects some of the key ethical questions raised in the Creative Informatics Ethics Statement. These questions are not exhaustive but are intended to help you review and reflect upon what you are doing and how you will ensure your product, service or business is consistent with ethical best practices. The table includes risk register elements to help you assess the risk and impact of any issue in each of the ethics areas. A combined risk of 1-8 would be considered a low risk; 9-14 would be a medium risk; and a risk score of 15-25 would be considered high risk. As you make notes on each ethics question, you should note the related risks and any mitigations (measures to stop it happening, or to reduce the impact if it should happen) for your own reference and record. We recommend regularly reviewing your risks on a monthly or quarterly basis and allocating a red (high risk)/amber (medium risk)/green (low risk) status – whether for your own reference or, ideally, reported to your board, funders, or similar authority to whom you report.

We recommend that you think of this as a living document – something you revisit and use as a starting point to talk with colleagues, update as processes change, and use to identify any areas where you may need informal or legal advice.

Ethical Consideration	from 1 (lowest) to 5 (highest)	from 1 (lowest) to 5 (highest)	Risk score (likelihood x impact)	Please explain your answers to the list of ethical considerations (e.g. your approach, processes, etc), particularly any notable risks, mitigations and any actions that may still be required.
Example ethics area	2	3	6	We are developing a standard process to address ethical issues, which is documented and understood by the whole team.
Existing Data: Any data I/we are using has been collected in fair and appropriate ways and is licensed/approved for the way we are using it.				

Ethical Consideration	Likelihood from 1 (lowest) to 5 (highest)	Impact from 1 (lowest) to 5 (highest)	Risk score (likelihood x impact)	Please explain your answers to the list of ethical considerations (e.g. your approach, processes, etc), particularly any notable risks, mitigations and any actions that may still be required.
Collecting New Data:				
My/Our practices comply with key legislation (GDPR, Data Protection, Privacy and Electronic Communications Regulation) and/or we are taking action to ensure compliance.				
I/We have considered if we need specialist legal advice on the data we are collecting.				
I/we have undertaken Data Protection Impact Assessments (DPIAs).				
I/we have considered the data we collect or plan to collect and ensured that:				
The use, aggregation and processing of any personal data is fair and appropriate.				

Ethical Consideration	Likelihood from 1 (lowest) to 5 (highest)	Impact from 1 (lowest) to 5 (highest)	Risk score (likelihood x impact)	Please explain your answers to the list of ethical considerations (e.g. your approach, processes, etc), particularly any notable risks, mitigations and any actions that may still be required.
There is a valid and legal basis for processing any personal data (consent or other legal basis).				
Any data is used for a defined purpose and there are processes to monitor any change in purpose.				
Users understand, through clear communication, how their data is being collected, how it is used now and may be used in the future, how and for how long their data is stored, who will have access to it and how they can make changes or withdraw consent in the future.				
Risks are minimised for more vulnerable users (which may include not capturing their data, clearer or alternative communications, easy withdrawal of consent, obtaining consent from a guardian or parent).				

Ethical Consideration	Likelihood from 1 (lowest) to 5 (highest)	Impact from 1 (lowest) to 5 (highest)	Risk score (likelihood x impact)	Please explain your answers to the list of ethical considerations (e.g. your approach, processes, etc), particularly any notable risks, mitigations and any actions that may still be required.
Long term privacy, social and ethical implications have been considered including processes for managing requests by users to change or withdraw consent for use of their data (e.g. by ensuring a valid point of contact for withdrawal of consent is always provided).				
I/We have considered our responsibilities towards users around any data that is or could be/become personally identifiable (e.g. location, biometric data, user behaviour data, personal images, etc.) and long-term privacy, social and ethical implications arising from the data, or of this data being used in combination with other data sets.				
Storing Data:				
I/We know where any data we collect and use is stored or processed, and this is compliant with legislation and user privacy rights (e.g. in the UK and compliant with Data Protection requirements) as well as user expectation.				

Ethical Consideration	Likelihood from 1 (lowest) to 5 (highest)	Impact from 1 (lowest) to 5 (highest)	Risk score (likelihood x impact)	Please explain your answers to the list of ethical considerations (e.g. your approach, processes, etc), particularly any notable risks, mitigations and any actions that may still be required.
Access to any data is restricted to authorised individuals who truly have need to access it.				
Data is safe from unauthorised insiders or external attackers and there are processes to respond if it is compromised.				
Data is stored and handled in the safest form through anonymisation, encryption, etc. (whether at rest or in transit)				
Inclusive Design:				
Our product/service/business is:				
Compliant with Equalities and Human Rights legal requirements.				
Designed to be inclusive of all those it affects (users, stakeholders, collaborators, etc.), with consideration of their diverse characteristics and needs.				

Ethical Consideration	Likelihood from 1 (lowest) to 5 (highest)	Impact from 1 (lowest) to 5 (highest)	Risk score (likelihood x impact)	Please explain your answers to the list of ethical considerations (e.g. your approach, processes, etc), particularly any notable risks, mitigations and any actions that may still be required.
Accessible to those with disabilities.				
Respectful of diverse populations and cultural backgrounds.				
Ethical Business and Employment Practices:				
My/Our business model and/or production methods respect others' rights.				
My/Our workers and subcontractors are paid appropriately for the minimum or living wage in their locality; their human rights are respected; and they are working under fair contract terms.				
My/Our product/service/business is not reliant on exploiting volunteered, underpaid or "gig economy" workers.				

Ethical Consideration	Likelihood from 1 (lowest) to 5 (highest)	Impact from 1 (lowest) to 5 (highest)	Risk score (likelihood x impact)	Please explain your answers to the list of ethical considerations (e.g. your approach, processes, etc), particularly any notable risks, mitigations and any actions that may still be required.
Data Analytics and Modelling:				
Any text and data mining, machine learning or Al used with data in my/our product/service/business:				
Are based on training data sets representative of wider and diverse society.				
Are not unfair, exclusionary or discriminatory.				
Do not reinforce or create new inequalities.				
I/We are committed to monitoring the fairness and appropriateness of our data analytics and modelling approaches to ensure they remain ethical and will take corrective action if we become aware of any previously unknown issues.				

Ethical Consideration	Likelihood from 1 (lowest) to 5 (highest)	Impact from 1 (lowest) to 5 (highest)	Risk score (likelihood x impact)	Please explain your answers to the list of ethical considerations (e.g. your approach, processes, etc), particularly any notable risks, mitigations and any actions that may still be required.
Environmental Impact: I/We have considered the environmental impact of our chosen technologies and reviewed less environmentally impactful				
I/We have or are in the process of reviewing the future environmental impact of any goods or physical materials that will be created and how this may be minimised (e.g. through measures to ensure they can be recycled).				
I/We are committed to reviewing the environmental impact of our product/service/business and, where possible, documenting and tracking this.				

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Ongoing Review:								
I/We are committed to reviewing this ethics self-assessment on a six-monthly basis and this is embedded in my/our organisational processes.		The named person responsible for this review is: The next review is due to take place on:						
Are there any ethical areas where you need	d furti	her advice or support? Where will you seek assistance for addressing these						
concerns?								
Py cianing holow you are indicating that:								
By signing below, you are indicating that:								
		ent, considered how it applies to my own organisation or practice, and completed the self-						
assessment checklist for my product, service	or bus	siness.						
Name:								
Date:								