The background features a complex geometric design with overlapping triangles and polygons in shades of orange, green, and blue. Several white icons are scattered across the design: a compass rose in the top left, a small compass rose in the top center, a large equals sign in the top right, a smaller equals sign in the middle right, a group of three people in the bottom left, and a CO2 symbol with a sad face in the bottom center.

# Value Compass

for digital  
transformation  
of education

Kennisnet

SURF

# 1 Value Compass for digital transformation of education

The Value Compass provides a frame of reference for structuring digital transformation based on values. SURF and Kennisnet, the public IT organisations for education in the Netherlands, have developed the Value Compass to provide a common language to stimulate the dialogue about digital transformation in education and the importance of educational values. SURF and Kennisnet are coordinating this discussion and promoting new initiatives to protect these educational values at the local, national and international levels.

Educational institutions have a public responsibility to prioritise values such as equal opportunity, meaningful contact and privacy. However, this responsibility can come under pressure during the process of digital transformation, as values that were formerly self-evident in educational practice are seen in a new light due to digital transformation. We therefore need to look at values with a fresh perspective.

#### For example:

- The increasing use of technology increases the dependence of students on hardware, software, connectivity and digital skills, so that a lack of one or more of these creates unequal opportunities. How, therefore, can we make sure that digital transformation does not compromise equal opportunity?
- Thanks to technology, we are able to work anywhere we like, at any time. Furthermore, (adaptive) digital educational resources are able to take over the tasks of teachers. However, the coronavirus pandemic has shown us even more clearly just how important

'real' physical and meaningful contact is between people. How, therefore, can we ensure a better balance between humanity and technology?

- How dependent are we on data? Who has control over the data? And, do we want to use data to obtain more insight into the educational process? If so, can we do so in a responsible manner? How can we benefit from data analysis while also ensuring the autonomy of students and teachers?

Digital transformation can support educational values, but the use of digital technology can also put them at risk. By conducting a dialogue about the values that need to be prioritised during the digital transformation process, we can ensure that better choices are made. If these values are prioritised in the design, procurement and use of new technologies, the education sector can ensure that it remains in control of the digital transformation process. Below, a description is provided of the values highlighted in the Value Compass,

followed by a number of examples to demonstrate how these values can be applied in varying contexts.

Digital transformation, including in education, is mainly being driven by a small number of dominant commercial companies. These large, often international, companies are becoming increasingly powerful, as a result of which their values come to dominate, rather than the values of the education sector as a whole. The increasing dependence on these companies strengthens the imperative to work together, and ongoing developments require more public control: cooperation and a joining of forces based on educational values.

# 2 The Value Compass

The three core values in education are **justice, humanity** and **autonomy**. In turn, these core values encompass many other values that are important in educational practice. The relevant importance of each value depends on the specific context.

### Values

*Values are general, abstract ideas or ideals toward which we strive and which shape our actions.*



## Justice

Justice comprises concepts such as equality, inclusivity and integrity. Education should offer equal opportunities to all, without disadvantaging or excluding any specific group. Social or cultural background and gender should not influence how pupils and students are treated. This means that all pupils and students should be treated without prior judgement, not just by their teachers, but also by algorithms. **Equality** is paramount in education.

**Inclusivity** in education means that it is open to all students. Everyone may take part, belong and be taught how to participate in society.

**Integrity** means, among other things, that education is trusted, transparent and verifiable, as are the data and systems that are used. Integrity also means that public resources are used for the purpose for which they are intended, while taking into account sustainability, to do justice to future generations.



— How do we prevent algorithms from disadvantaging or favouring certain groups?

— How do we ensure that everyone can participate in digital education?



## Humanity

Humanity means having consideration for the human aspect in the education sector. It comprises social cohesion, meaningful contact, respect, safety, health and well-being, and self-development. Educational institutions are places for **social connection**, encounters and **meaningful contact**.

An educational institution should **respect** the unique character of every student, who should be seen and heard as an individual rather than treated as a number or a cog in the system. It should provide a **safe** environment – online, physical and mental – and safeguard the **health** and **well-being** of its students.

In this environment, it should be possible to make mistakes that do not have an impact beyond the educational context. The human perspective is paramount in education: not a single decision should be taken or opinion expressed about a student that is based purely on data analysis.

Education encourages **self-development**: the expression of the individual character of students in relation to the world.

*How do we ensure that technology in education contributes to meaningful human contact?*

*How do we ensure that measuring and monitoring performance does not come at the expense of the space to practice and fail safely?*



## Autonomy

The literal meaning of autonomy is to live under your own laws. Autonomy comprises values such as self-determination, the safeguarding of personal privacy and educational independence and freedom. Students have the right to **self-determination**: they have sufficient freedom to choose the type of education that suits them and they have autonomy over their development and choices.

The **safeguarding of personal life and personal data** is an important part of autonomy: lecturers and students need to know that their privacy is ensured when they use the digital resources of their educational institution, and that they may determine how their data is used.

**Educational independence** means that educational institutions are able to teach without external interference.

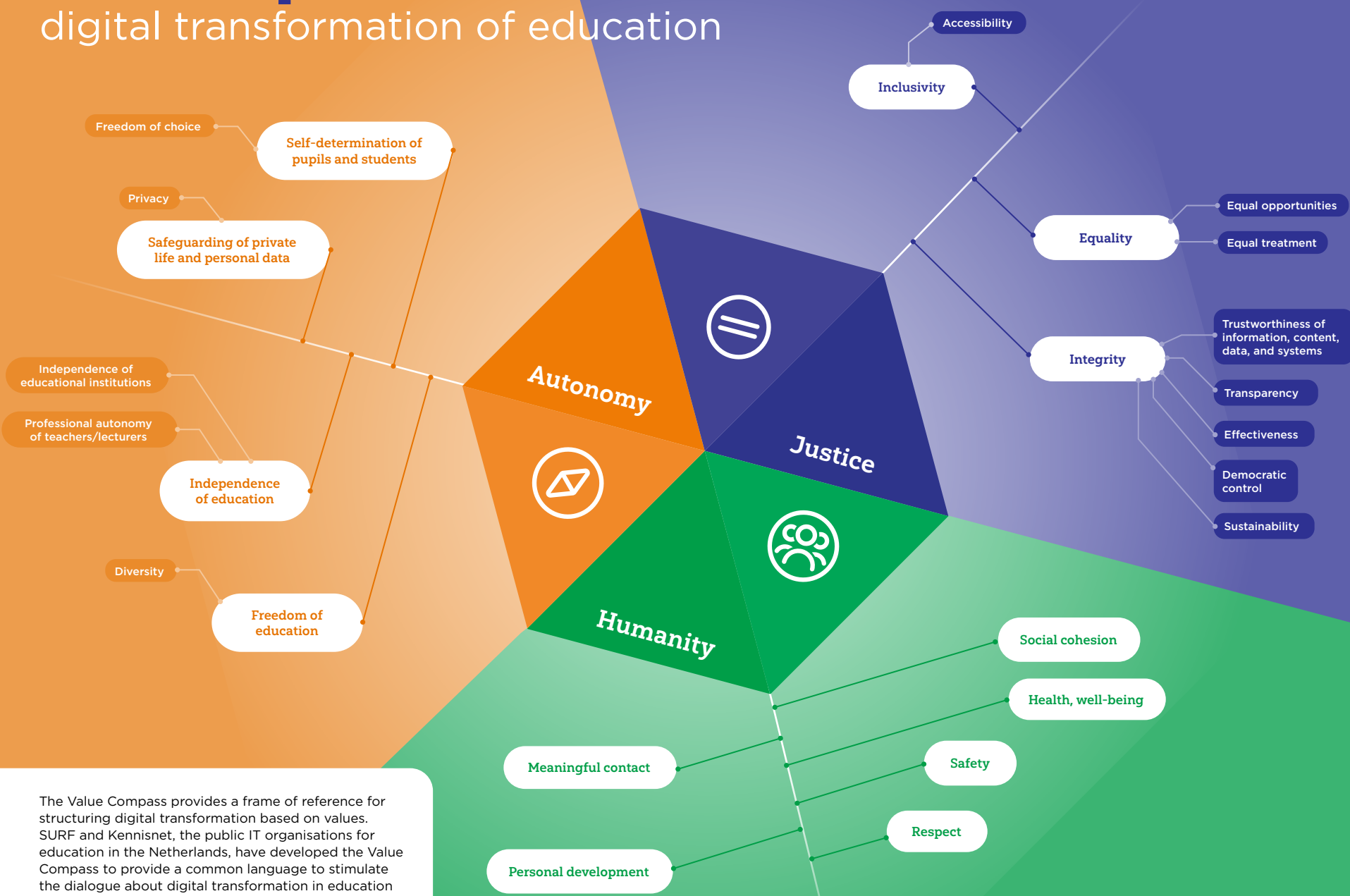
**Educational professionals** have the freedom to make their own choices and decisions in the supervision of their students, based on their professional autonomy.

**Educational freedom** means that educational institutions are able to structure their teaching based on the distinctive character and convictions of the institution and within the boundaries of the law and the contours of a free, pluriform and democratic society.

*How do we prevent the increasing data collection of market parties from violating the privacy of students and educators?*

*How do we maintain our independence and professional autonomy when deploying products from large tech companies and publishers?*

# Value Compass for digital transformation of education



The Value Compass provides a frame of reference for structuring digital transformation based on values. SURF and Kennisnet, the public IT organisations for education in the Netherlands, have developed the Value Compass to provide a common language to stimulate the dialogue about digital transformation in education and the importance of educational values.

# 3 The Value Compass in context

By considering digital transformation from the point of view of values, we can understand the dilemmas and the consequences for those involved more quickly. Making decisions often involves weighing up values, as they are not always compatible, and a dialogue about values can therefore help to come to well-considered decisions.

The Value Compass helps to identify shared values and to talk about their significance and whether and how they may be compromised in the context of new digital possibilities. Ensuring that such a discussion takes place can help the education sector to structure digital transformation in a way in which it is able to safeguard its public responsibilities and values, for students and teachers.

This discussion about educational values must take place at various levels:

- At the school and institution levels
- At the sectoral or cross-sectoral level

Luckily, this discussion is already underway in the education sector, and the following examples show that a good foundation is being laid for a value-based governance.

## At the school and institution levels

### Smartwatches: a good idea?

The school board of a school for children with special needs was wondering: is it was a good idea to use smartwatches in the classroom? The smartwatch could send a signal to alert the teacher, for example in the event of a tantrum, preventing an escalation of the problem and benefiting the well-being of all the students in the class. However, the board wondered what the impact would be on other values. Following the steps described in 'the Ethics Compass', they were able to analyse the issue, and decided to wait and first gather more information on the impact that it would have on pupils' privacy.

### Ethical aspects of chatbots in Vocational Education and Training (VET)

A VET (MBO in Dutch) school started an experiment with a chatbot that is used to help students to apply learning strategies. The team wondered: what are the ethical issues involved? Using 'the Ethics Compass', students, lecturers and ICT coordinators were able to discuss the ethics of using chatbots in an educational setting.

### Awareness of the impact of technology

A Dutch university of applied sciences has developed an online tool to increase students' awareness of the impact of technology. The tool includes crash courses and smart scans to assess the impact of technologies on values such as inclusivity, privacy and human dignity.

### Values in online proctoring

During the coronavirus pandemic lockdown, universities did everything that they could to ensure that students did not fall behind in their studies. An important part of this was the implementation of online assessment, for which some institutions also used online invigilation software, also widely known as online proctoring software. The

use of such software led to a discussion on values, in particular, the privacy of students and whether online proctoring was a disproportional violation of this. Each institution faced the dilemma of how to implement a flexible assessment system that also guaranteed the safety and privacy of its students.

## At the sectoral or cross-sectoral level

### Value workshops

The Primary Education Council (PO-Raad) has developed a [workshop for school boards](#) based on a future scenario for the education sector in 2035. Workshop participants take on the role of a venture capitalist looking to invest in a commercial platform that could potentially replace the public education system. Based on stories set in the future, historical classroom settings and discussion questions, they are challenged to take a critical look at the impact of technology. In which situations can technology make a real contribution to the quality of education, and in which situations does it have a negative impact on educational values? The workshop helps teams to develop or refine a shared vision on IT.

### Ethics by Design

Values can serve as input in the design of digital technologies: this is called [ethics by design](#). Creating a value hierarchy will provide you with a dedicated tool for value-driven design, which links values to design guidelines. Educational institutions can use this tool to guide the design of digital technologies.

### Anchoring values in architecture

The [Higher Education Sector Architecture \(HOSA\)](#) is a sectoral architecture that provides a framework for suppliers and developers of IT resources for the education sector. HOSA can be used to identify the requirements that IT services must comply with, and these are based on the general principles of HOSA. These principles are closely related to public values such as privacy, inclusivity and sustainability. HOSA is therefore an important instrument for ensuring that these public values are included in the architecture

### Logging in safely and securely

[SURFconext](#) and Kennisnet's [Entree Federatie](#) allow primary schools, secondary schools and higher education institutions to provide their users with a digital identity that gives them trusted access to various online services. Privacy is safeguarded by never providing more information than is strictly

necessary. Open standards make it easier for institutions to switch to a different identity and access management (IAM) infrastructure supplier, which makes SURFconext and Entree Federatie important tools for safeguarding public values such as trust, safety, and privacy.

### Combined strength through SIVON

[SIVON](#) is a cooperative of school boards in primary and secondary education. It works together with school boards to develop and put in place a stable ICT infrastructure, and coordinates procurement requirements, collaboration and the exchange of knowledge for its member school boards. By pooling schools' procurement strength, SIVON is able to provide ICT resources that are more closely in tune with educational values.

### Working together to safeguard privacy

The education councils, Kennisnet, SURF and SIVON are working together in the area of information security and data protection, for example, in the implementation of [Data Protection Impact Assessments \(DPIAs\)](#). A DPIA provides insight into how data is processed by the platform services widely used in the education sector by companies such as Google and Microsoft, what happens to the data, and what the risks are. Such insights improve the ability of educational institutions to ensure compliance with data protection legislation.

### Combined strength through SURF

The SURF cooperative represents more than one million users and has the tools, the knowledge, and the manpower available to enable the [joint procurement of ICT services](#). Such joint procurement and other benefits mean that SURF members are in a strong position to work together with commercial parties under conditions that are important to the education sector. Together, institutions have greater clout to negotiate conditions on price, security, privacy, system and data interoperability, and data portability.

## Further reading

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## Colophon

### Text & editorial

Christien Bok, Iris Huis in 't Veld - SURF  
Erwin Bomas, Lotte Dondorp,  
Remco Pijpers - Kennisnet

### Graphic design & layout

Vrije Stijl Utrecht

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# Justification

## How did the Value Compass come about?

The explicit identification of values is not an objective science, but we can fall back on intersubjectivity: there is a shared perception in society of the values that we all subscribe to. Kennisnet and SURF worked together with experts from the Rathenau Institute, the University of Amsterdam, saMBO-ICT, Géant and the Dutch Ministry of Education, Culture and Science to develop the Value Compass. Input was also obtained from educational institutions, sector councils and experts on the Ethics Advice Council. The Value Compass is based on various resources on public and educational values within the context of digital transformation in education.

## Current status of the Value Compass

The Value Compass takes its place among other important moral frameworks, such as the ethical decision-making framework for the healthcare sector and the European Commission's ethical guidelines for the use of artificial intelligence. However, the much older cry of 'liberty, equality and fraternity' from the time of the French revolution can also be heard. The core values of justice, humanity and autonomy can also be related to the objectives of education as identified by Gert Biesta: qualification, socialisation and subjectification.

*The Value Compass is not intended as a prescriptive guideline, but as a benchmark and tool for the consideration of educational values.*

## Would you like to know more?

- **Remco Pijpers** (Kennisnet) - [R.Pijpers@kennisnet.nl](mailto:R.Pijpers@kennisnet.nl)
- **Christien Bok** (SURF) - [christien.bok@surf.nl](mailto:christien.bok@surf.nl)

Kennisnet

Postbus 778  
2700 AT Zoetermeer  
T 0800 321 22 33  
E [support@kennisnet.nl](mailto:support@kennisnet.nl) | [kennisnet.nl](http://kennisnet.nl)

SURF

Moreelsepark 48  
3511 EP Utrecht  
T 088 - 787 30 00  
E [info@surf.nl](mailto:info@surf.nl) | [surf.nl](http://surf.nl)



**Value Compass**  
for digital transformation  
of education

**Kennisnet**

Postbus 778

2700 AT Zoetermeer

T 0800 321 22 33

E [support@kennisnet.nl](mailto:support@kennisnet.nl) | [kennisnet.nl](http://kennisnet.nl)

**SURF**

Moreelsepark 48

3511 EP Utrecht

T 088 - 787 30 00

E [info@surf.nl](mailto:info@surf.nl) | [surf.nl](http://surf.nl)

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