European Social Network

Leading Social Services

TRANSFORMING SOCIAL SERVICES THROUGH DIGITALISATION

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About the European Social Network (ESN)

The European Social Network (ESN) is the independent network for local public social services in Europe. It brings together the organisations that plan, deliver, finance, manage, research, and regulate local public social services, including health, social welfare, employment, education and housing. We ensure the visibly of the perspective of public social services at the European level, while supporting the development of effective social policy and social care practice through the exchange of knowledge and expertise.

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Introduction

Our work on Social Services Digitalisation

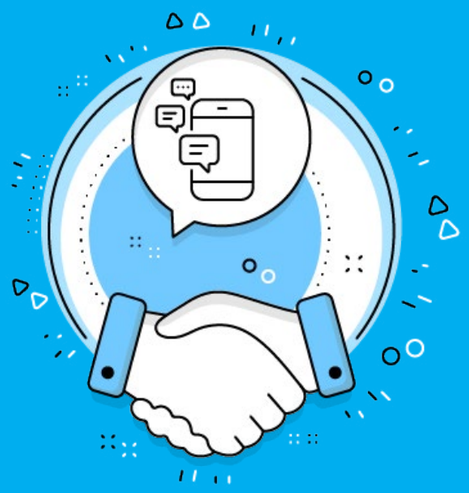
In 2019, the European Social Network (ESN) launched a working group on the Digitalisation of Social Services. The aim was to reflect on how the increasing role of technology impacts social services management (planning, delivery and evaluation) and to understand the challenges that the use of technology may bring for the adaptation of public administrations responsible for social services.

Based on an initial questionnaire, the working group identified a number of emerging technologies that may have a profound impact on social services planning, delivery and evaluation. These are identified in the list below:

- Socially assistive robots (SAR's);
- Cognitive assistant robots (CAR's);
- Physically assistive robots (PAR's);
- Artificial intelligence (AI);
- Machine learning (ML);
- Case management systems;
- Big data;
- Care coordination aids;
- Smart sensors;
- Smart phones;
- Computer tablets.

As well as these technologies, the working group also pinpointed the challenges that organisations, case workers and people using social services may face regarding the use of technology:

- Funding;
- Commissioning;
- Staff training and development;
- Ethics and Safeguarding;
- Privacy and data implications;
- The culture of care;
- Move beyond prototype;
- Lack of research;
- Limited evidence base;
- Infrastructure;
- Accessibility.



2019 Working Group Meeting

The 2019 meeting of the working group brought together members and experts from a range of countries to discuss the impact of **case management digitalisation in social services.**

Case Management is the coordination of activities on behalf of an individual, or a family, to deliver benefits and/or services.

Presentations at the meeting included academics such as Amanda M L Taylor-Beswick at Queens University Belfast discussing her work on '**The Digitalisation of social services**', through to examples of social services case management digitalisation from ESN member organisations in Northern Ireland (UK), Lombardy (Italy), Lisbon (Portugal) and Asturias (Spain).

In the meeting, ESN members discussed the features and advantages of case management and digitalisation. Learnings included:

- Case Management can be used to address the growing caseload and increased duration of cases;
- Many members are looking at the integration of health and social care data, subject to the necessary conditions for data sharing. In Asturias (Spain), they implemented a local law to allow use of data across domains as no national law existed;
- Case Management systems give the opportunity to provide integrated services across social and health care. For example, in Lombardy (Italy) there are 2,873 community healthcare units, 8,075 social care units and 35 healthcare organisations, but care for older people crosses all areas, hence an integrated health and social case management system plays an important role in service management and provision.
- Different target groups have different needs and these needs should be integrated into the case management system;
- Co-development with a mixed team of developers and social workers is required for effective case management;
- Case management systems have become more user friendly with time;
- Good project management and change management are required to implement new case management systems;
- Organisations need to recognise the generational gap in the workforce. Younger practitioners often adapt faster than older ones;
- The importance of considering bias to develop ethical case management systems, especially where 'big data' is involved.

Additionally, meeting participants discussed areas that inhibit the uptake of case management by organisations and case workers. Examples included:

- Sharing of data is required to be effective in many areas. This often requires strengthening of the legal provisions for data access and sharing;
- Social workers do not always feel ready for digitalisation and there is a critical importance of both good and relevant training;
- There is a need to consider the fundamentals of subsidiarity in social welfare systems and the risk that digitalisation may affect that with overly centralised implementation;
- There are limited agreed definitions of social care best practice and standards to enable case management digitalisation.

Participants at the meeting concluded that there were substantial benefits of digitalisation and the increased use of case management. However, they also concluded that further work would be required to improve standards, working practice, case worker training, and legal structures to support data sharing and usage.

In 2020, investment in case management was also assessed in the framework of the Covid-19 pandemic. The results of a questionnaire and the meeting show that case management is a relatively mature area of focus for many social services public administrations.

IN PRACTICE
CASE MANAGEMENT

E-case management system for children's court cases

The management of children's court cases is often paper based with no digital interface with local social work authorities.

Due to an increased number of care applications and delays in court decisions for children and young people in Northern Ireland, the Northern Ireland Social Care Council developed an electronic case management system. The system allows specialist social workers to follow court cases and has contributed to decreasing delays in decisions for children and young people in court.

All case-related data about children and their parents/guardians are collected and provided to health and social care trusts, who can plan workforce and child protection intelligence accordingly. The system supports digital recording and delivery for specialist social workers at the point of care through integrated case recording technology, such as digital pens and digital dictation. The system also supports workload management through its inbuilt caseload weighing system. It ensures that information is shared digitally and securely with all parties in children's family law cases in Northern Ireland.

The Northern Ireland's Department of Health jointly invested a total capital fund of £250,000 on this project. Two full time staff members worked on delivery with the supplier for six months. They engaged with social workers, legal professionals, and officials from the Department of Health. The project board met twice per month for a total of 8 months.

IN PRACTICE
CASE MANAGEMENT

Electronic social records

As there had been several processes running in parallel for the development of electronic social records across the region of Lombardy (Italy), its regional government and A.R.I.A. S.p.A, the regional enterprise for innovation and purchasing, developed an information tool and guideline for local authorities to harmonise the process of developing electronic social records.

The objectives of the project were to support local authorities in developing electronic social records to allow both planning and governance of social services and information sharing obligations with regional and national authorities. As there was no legal basis for the exchange of social and health data, the region of Lombardy drafted its own regional act so that this project could be implemented.

Resources include costs related to the creation of the regional guidelines and costs borne by local authorities to implement the information tool for a total of 20,000 EUR.

The regional guidelines developed by A.R.I.A. S.p.A allow to have a more uniform and efficient approach in terms of sharing and managing relevant health and social care data between regional and local authorities.

Initial outcomes have been promising. Based on the guidelines, 40 local authorities with responsibility for social care started to create new electronic social records while 45 local authorities adapted their existing ones. Likewise, 73% of social records had been digitalised by the start of 2020 and were compliant with regional guidelines, while 89% of professionals were regularly using the information tool.

2020 Working Group Meeting

In 2020, the working group decided to turn its attention to how the Covid-19 pandemic impacted social services, in particular in relation to the **use of data** and **service innovation and improvement.**

A questionnaire was created and shared with ESN member organisations from July to September 2020 to look at what organisations were investing in prior to Covid-19 and how investment changed during the pandemic. ESN received 44 valid responses from national, regional and local government, and a few non-for-profit and directors/professionals associations. There was a wide range of representation from 14 European countries: ES, UK, SE, FI, AT, IT, MT, LT, BE, CH, RO, PT, IL, HU.

1. Use of Data and Analytics

The first grouping of results from the survey was categorised as Data and Analytics. This includes the following areas:

- Robotics Process Automation (RPA);
- Predictive Analytics;
- Machine Reading/Machine Learning;
- Data Warehousing.

Robotics Process Automation (RPA)

RPA is an automation technology for business processes, based on metaphorical software robots (bots) and/or artificial intelligence (AI) digital workers. It is sometimes referred to as software robotics (not to be confused with robot software).

RPA questions addressed automating current and new processes for workers, people using services, and system processes (such as back up and regular data updates).

Most respondents slowed their investment in RPA during Covid-19, even though this was the largest area where people were working before the pandemic. More than 15 of those who answered highlighted that they stopped investing in automating system processes or new clients, as well as manual processes for workers.

The area of largest new investment was in 'automating current manual processes for workers', while the areas where organisations were investing pre-pandemic, and mostly continued to invest, was in 'automating system processes' and in 'automating new clients'. A couple of organisations highlighted that they used RPA to automate remote calling and remote monitoring.

From the questionnaire, it was clear that RPA was in extensive use with many members and that this is a potential bridge from older to newer systems.

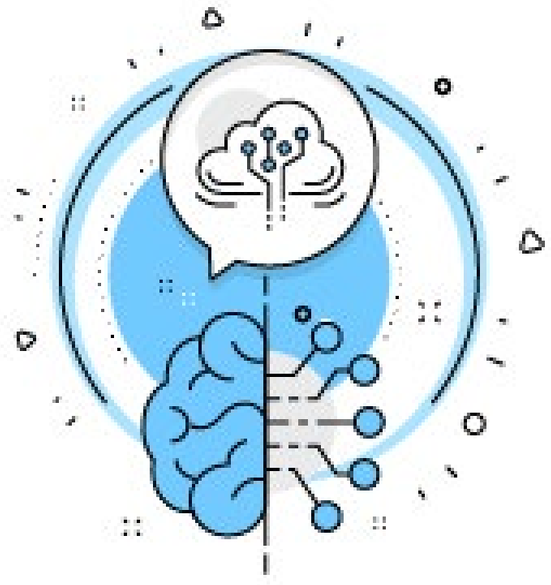
Predictive Analytics

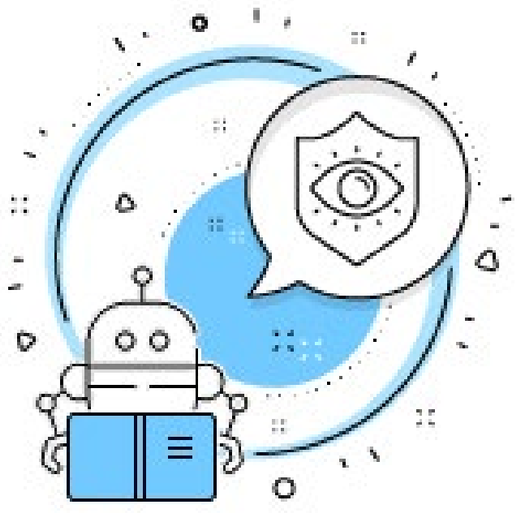
Predictive Analytics consist of statistical techniques to analyse historic and current data to make future predictions; for example, about what types of services may be required for certain populations.

The questions from the survey focused on exploring whether members invested in optimising services, forecasting future demand, establishing risk profiles or address fraud.

There appeared to be a good range of investment in predictive analytics during Covid-19 compared with other data and analytics areas. The largest new investment was in 'service optimisation', while respondents reported relatively high continued investment in 'future demand forecasting'. But it was 'risk profiling' where we saw the largest continued investment where five organisations continued to invest and three started to invest.

Predictive analytics appears to be in relatively limited usage among public social services, but the survey showed that those who are using are investing more. Those members not yet using predictive analytics may see potential in the future.





Machine Reading/Machine Learning

Machine Reading/Machine Learning uses computer algorithms that improve automatically through experience.

In this section of the questionnaire, we asked members whether they invested in reading and interpreting case notes, automating decision-making or automation of forms.

ESN member organisations were already investing in 'reading and interpreting case notes' and 'forms automation' before Covid-19. Just two organisations reported new investment in 'automated decision-making'. Overall, machine reading/learning saw the largest percentage reduction in investment by organisations, but from a smaller baseline than other areas of the survey.

Machine Reading/Machine Learning is a relatively new area for investment for many social services organisations. The survey indicated that this has yet to be a priority for even those that have already started.

Data Warehousing

Data Warehousing is a reporting and data analysis system core to business intelligence

In the questionnaire, we asked members whether they had been investing in new reports, new combinations or new sources of data.

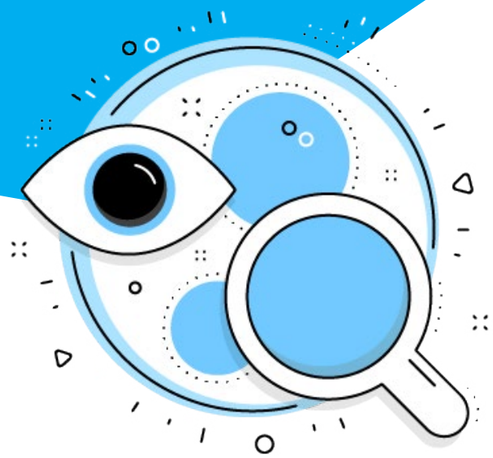
Members responses showed a mix of investment types, but generally a high reduction in investments in data warehousing. Nonetheless, a reasonable number of organisations did invest during Covid-19, especially in 'new data sources'.

Generally, those organisations that invested during Covid-19 had already been investing before the pandemic started. The largest area of continued investment was in 'new reports' to support management information relating to the pandemic.

It was clear from the questionnaire that the use of data is now prevalent in many social services administrations. The changes undertaken by many administrations indicate a level of maturity and willingness to adapt to the pandemic.

IN PRACTICE
USE OF DATA AND ANALYTICS

SisVAT Covid-19



Containing Covid-19 outbreaks in care homes has been a significant challenge during the pandemic due to how fast the virus spread and the special characteristics of people living in care homes in terms of aging and previous pathologies. This project was implemented to enable real-time relevant information for the 240 care homes located in the region of Asturias (Spain), where 12,939 older people lived in care homes at the beginning of the crisis.

SisVAT-COVID19 connected every care home, via the Internet, with the Asturias Department of Social Care and played a key role in managing the crisis. The tool was designed based on e-questionnaires that were easy to fill in not to overload the professionals responsible for collecting and sending the information.

The information was then used to plan personal protective equipment (PPE) purchases, define measures and protocols, give guidance, advice and support in the implementation of protocols, manage cases of social emergency, carry out referrals of infected residents to hospital, the medicalisation of care homes and reinforcing staff where necessary.

The outcomes from this solution have been significant:

- Knowing the situation of each care home at each moment allowed the isolating of those centres that had no positive or suspicious cases;
- Enabling plans for massive tests in centres with suspected or confirmed cases and identifying asymptomatic cases;
- Better management of already identified positive cases;
- Planning material and human resources allocation;
- Providing families of care homes users information on the epidemiological status of each home.

Why have public social services invested in digitalisation during Covid-19?

- To implement changes in the provision of benefits and services;
- To carry out changes in policy and procedures;
- To reorganise staff;
- To respond to changes in services demand.

Most procured investments through established procurement processes, but some also put in place new procurement as well as emergency measures.

2. Service Innovation and Improvement

The second grouping of results from the questionnaire was categorised as service innovation and improvement. This includes the following areas:

- Chatbots;
- Case Management;
- Web forms/Digitalisation;
- Telecare;
- Other Solutions.

Chatbots

Chatbots are software applications used to conduct an on-line conversation via text or text-to-speech instead of direct contact with a professional.

In the questionnaire, we asked members whether they invested in virtual customer service agents, online help services and service enhancements (e.g. similar to a hotel virtual butler).

This was a mixed area of investment and the only area that had as many organisations investing during Covid-19 than before it. In the area of 'virtual customer service agents' – those organisations that were investing stopped and three organisations started investing. In the 'online help service' area, only four organisations stopped investing during Covid-19 and the remainder (eight organisations) carried on, while four new organisations invested for the first time.

The low number of responses indicate that this is still a relatively new area for investment among ESN members. It indicates that those organisations investing in chatbots see potential and the prevalent use in other industries would suggest potential value for organisations that have not yet invested in them.

Case Management

Survey questions covered whether members invested in new benefit and/or services workflow and work management processes. We also asked whether members widened participation in cases, made changes to delegation or authorities, or automated manual processes. Based on the responses, we can conclude that there was a reduction in investment, but new investments were made too. In particular, investment was made to widen participation of people in the case and automation of manual processes. In general, case management is a relatively mature area of focus for many social services public administrations.

Web Forms/Digitalisation

Web Forms/Digitalisation is defined as the use of the internet for the application of benefits and services and the digital interaction with the organisation.

We asked members whether they invested in digitalisation of application forms, uploading documents and evidence for cases, providing the status of services and/or benefits, account management functions or recertification processes.

We found that there was some reduction in investment, but in most organisations, they either continued to invest in the same solutions, or added new solutions to their current investments. In 'application forms and document/evidence upload', most of the organisations that are currently investing were also doing so before Covid-19. Twelve

organisations continued to invest in ‘applications forms’ and eleven in ‘document upload’. However, in both cases over fifteen organisations stopped investing. In ‘recertification’, most of those organisations that were investing before stopped and most of the investment during Covid-19 was from new organisations.

Overall, this was the largest area of continued investment based on the answers to the questionnaire. The results show that organisations needed to inform people using their services about them and updated information and adjusted their online services accordingly due to the pandemic.

Telecare

We define Telecare as offering remote care of vulnerable populations to help them remain in their homes.

We also asked members whether they invested in remote consultation/diagnostics, remote monitoring or follow-up services.

Indeed, telecare is the largest area of new investment based on members responses. There was some drop off from current investments, but there were also significant new investments made. For example, while eight organisations stopped investing in ‘remote consultations’, seven continued to invest and nine made new investments.

‘Remote monitoring’ and ‘follow up services’ both had a high number of continuing and new investments, but not as high as ‘remote consultations’. They also had a relatively high reduction from previous Covid-19 investments, where at least eight organisations stopped.

The results of the questionnaire indicated that the pandemic likely created the right conditions for organisations to make major steps in their thinking around telecare.

Other Solutions

We also asked member organisations whether they invested in other digital solutions that were not covered in the questionnaire. Those organisations that were investing in ‘individual identification and validation tools’ before the pandemic, stopped during it.

While many organisations had ‘internal video conferencing’ before, it was clear from the questionnaire that a large number did not and there was both high continuing investment and new investment in this area. Other investments included remote working tools, from Zoom to providing laptops to staff, broadcasting meetings and remote training.

IN PRACTICE
SERVICE IMPROVEMENT

Fall Detection System

In Latvia, State loans were provided to municipalities to reduce the impact of the crisis related to Covid-19. The social welfare department of Riga city council submitted an application for funding to implement a fall detection system and a unified smart monitoring system in all social care centres. Their aim was to enable multiple monitoring of indicators, a timely response for care workers and reduce unnecessary contact of care workers with clients.

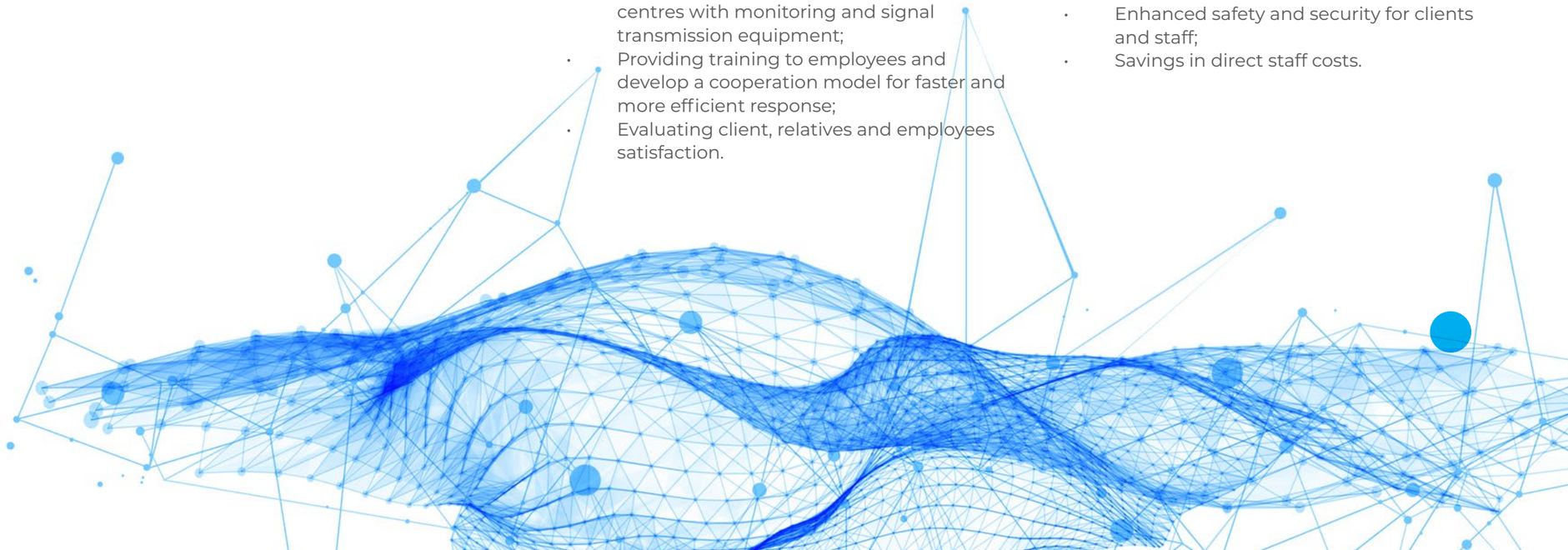
Project activities included:

- Carrying out the reconstruction of wi-fi infrastructure in two social care centres;
- Installing 160 smart client monitoring sensors in three social care centres;
- Providing the employees of social care centres with monitoring and signal transmission equipment;
- Providing training to employees and develop a cooperation model for faster and more efficient response;
- Evaluating client, relatives and employees satisfaction.

Total funding was 349,160 EUR, of which 87,290 EUR was co-financed by the municipality of Riga and 261,870 EUR from a State loan (75%).

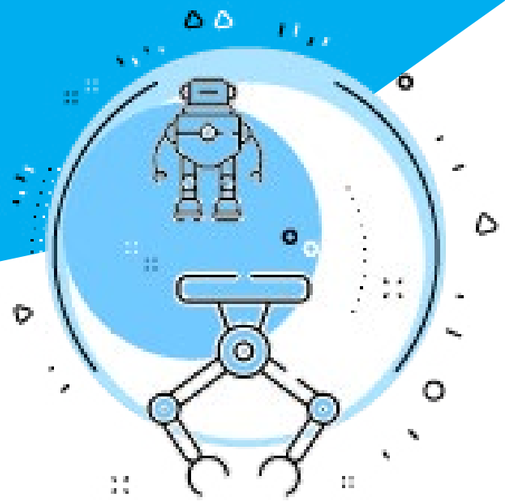
The primary beneftis experienced through the project were:

- Greater independence for the client as they were less restricted due to remote monitoring;
- Better social distancing due to less direct intervention;
- Improved client service response time;
- Enhanced safety and security for clients and staff;
- Savings in direct staff costs.



IN PRACTICE
SERVICE INNOVATION

Cobots



Long before the Covid-19 pandemic there was widespread concern about how the UK social care system would cope with the demands of an ageing society and a looming shortfall in the care workforce. Post lockdown, there were additional concerns about the physical and emotional toll on carers, and a dawning realisation that multiple paid carers routinely entering the homes of vulnerable people is untenable.

Hampshire County Council has been trialling the use of collaborative robots or 'cobots'. Cobots are lightweight, battery-powered devices, which carers wear around their lower back. The technology within these 'lumbar devices' picks-up movement in the wearer and supplements it with sophisticated motors. The majority of those who have used them in the trial have been very positive. Carers have said: "it makes holding a person in a position where we can wash them so much less of an effort". "It reminds me to adopt the right posture before I attempt to reposition a service user" and; "at the end of my shift I am just not as tired as usual", said another carer.

The cobot is an investment for the carers, so they report feeling more valued. Some predict it could enable them to continue in this demanding role for longer. New technology may attract younger people into the sector, and the protection from injury may mean they worry less about the physical risks in care delivery.

This technology reduces the requirement for 'doubling up' in a care visit, meaning the workforce can be deployed more flexibly to meet growing demand. Crucially, during the Covid-19 crisis, carers felt less exposed to the risk of infection.

For care providers, the potential advantages of blending a human and cobot workforce include reduced staff sickness absence, lower turnover, and a consequent reduction in recruitment effort and costs.

Transforming Social Services Through Digitalisation

Investment Proposals

The European Union's financial budget for 2021-2027 together with national funds for recovery mean a significant opportunity to invest in digitalising social services across the board through the Recovery and Resilience Facility and the European Social Fund+. With their focus on digital transition, this is a chance for social services to invest in modernisation and reform.

Examples of transformation in social services include:

- Develop digital competences of social services professionals through co-design models involving developers and practitioners;
- Build collective intelligence models that with the help of machine reading and learning techniques assess sets of data to forecast trends and support professionals in service decision-making;
- Integrate in data models an analysis of potential bias in algorithms used in the digitalisation of social services to prevent any form of discrimination;
- Create standards in social services digitalisation to be shared across all administrations involved in social service planning, delivery and evaluation;
- Advance tele-care programmes including remote assessment, consultation and monitoring;
- Support the workforce with the physical aspects of care by rolling out collaborative devices that help with lifting, remote e-keys, fall detection and smart monitoring sensors across home care and nursing homes;
- Improve data management and sharing across services through joint digital platforms that are accessed based on layers by professionals and people using services;
- Enhance the modernisation of public administration by automating current and new processes for professionals and for people using services, as well as system processes such as back up and regular data updates;
- Better the experience of people using social services through chatbots and the digitalisation of web forms and upload for processes application.

Looking Forward

It became clear from the answers to our questionnaire and the discussions held so far by the working group that social services are ready to invest in digitalisation, if this means they can better support people using services. The Covid-19 pandemic has further encouraged social services authorities to explore digitalisation and its benefits to case data management and service improvement.

We identified that public social services have been investing in digitalisation during the Covid-19 crisis, especially in warehousing, predictive analytics for future demand forecasting and remote monitoring. Many public authorities are looking further at the integration of health and social care data, with case management providing the opportunity for integrated services across health and social care.

Examples of the use of data to analyse and improve the delivery of social services include amongst others:

- digital tools to collect near time data to help decision-makers to transfer resources across services;
- apps combining analytics for social inclusion such as support in finding a job;
- or machine and deep learning techniques that process the text and make proposals for the professionals to support them in decisions about interventions, services and benefits.

Other examples of investments in social services digitalisation include programmes on integrated care delivery and social service enhancements and innovations to promote independent living.

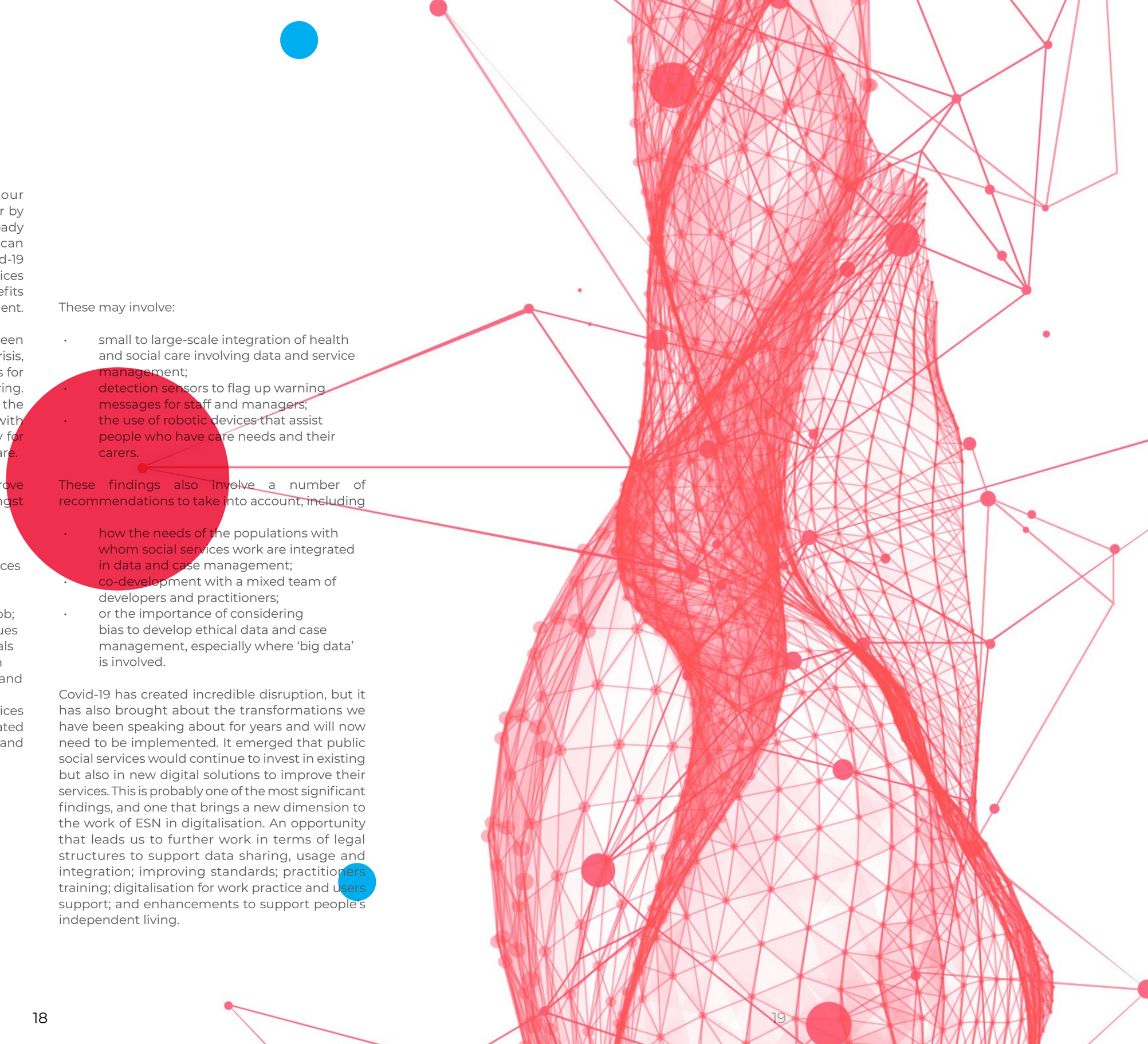
These may involve:

- small to large-scale integration of health and social care involving data and service management;
- detection sensors to flag up warning messages for staff and managers;
- the use of robotic devices that assist people who have care needs and their carers.

These findings also involve a number of recommendations to take into account, including

- how the needs of the populations with whom social services work are integrated in data and case management;
- co-development with a mixed team of developers and practitioners;
- or the importance of considering bias to develop ethical data and case management, especially where ‘big data’ is involved.

Covid-19 has created incredible disruption, but it has also brought about the transformations we have been speaking about for years and will now need to be implemented. It emerged that public social services would continue to invest in existing but also in new digital solutions to improve their services. This is probably one of the most significant findings, and one that brings a new dimension to the work of ESN in digitalisation. An opportunity that leads us to further work in terms of legal structures to support data sharing, usage and integration; improving standards; practitioners training; digitalisation for work practice and users support; and enhancements to support people’s independent living.



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