Digitisation and Work 4.0
DigiT

Trade union and company employee initiatives for co-design of Work 4.0 in the European ICT industry and on the European Works Council (EWC) of Deutsche Telekom

Workshop 2 (January 2019)
DIGITISATION, WORK & EMPLOYMENT

Participants at the Workshop 2: EWC-members Deutsche Telekom and Union representatives from Austria, Germany, Hungary, Spain and Croatia

VS/2017/0419 (digiT)

Arbeit und Leben Bielefeld e.V. DGB|VHS

Make digitization in a humane way

Digitalisation and Work 4.0 are not finished concepts but processes of change that can be shaped in an operational context.

The consequences in terms of working conditions, the level of employment and labour relations are by no means technologically determined, but depend on the specific form they take, and the application they are given in the respective companies.

Which concepts of Work 4.0 will ultimately prevail depends to a large extent on the operational participants. Trade union lobbies are therefore well advised to deal with specific company projects at an early stage and to proactively help shape their implementation.

„The age of globalisation and digitalisation poses major challenges to society in general and to workers and trade unions in particular. Digital technologies offer opportunities for job creation as well as new empowered and self-determined ways of working.

They also provide work related challenges: technological unemployment, digitally accelerated restructuring and worldwide relocation of work, fragmentation of workforces through mobile and hyperflexible work, new forms of low-paid and precarious work on platforms, increased regimentation of work and digital control through data as an instrument of management power.

Digitization and Work 4.0 can become a successful future program for companies and employees if employee and works council participation is promoted.

The focus of the interest of trade union lobbying is therefore on the consequences for the:

- Type and extent of employment
- Changing qualification requirements
- Physical and psychological effects
- Employment relationships governed by labour law

The participation and exertion of influence will be all the more successful if the work of the representative body is based on a specific model of labour policy. This serves as a guidepost and orientation framework for proactive exertion of influence in the sense of humane work design.

Trade unions play a crucial role in positively influencing this process to ensure that this era is innovative and sustainable for workers and society as a whole and that its benefits and opportunities are fairly and evenly distributed. Striving to contribute to the common good, trade unions stand up for high-quality jobs and employment across the services sector.

Skilled workforces are indispensable to realise the potential benefits of digitalisation.“

UNI Europa: Shaping Industrial Relations
https://unieuropaprojects.org/shaping-industrial-relations/

Co-creation of Work 4.0 in the digitalised world of work

Key questions relating to the design and structuring of good digital work

Securing employment

- Rising / constant / falling
- Are there likely to be shifts in the volume of employment between departments, locations and countries?
- Is there an increase in precarious forms of employment: crowdworking, crowdsourcing, temporary workers

Work content

- Upgrading of activities: more complex, more varied, more interesting, of higher value, machinery/IT as an aid, opportunities for positive development of remuneration
- Downgrading of activities: monotony, less scope for decision-making, humans subservient to the commands of "the machine" (assistance, Big Data, etc.), danger of lower remuneration and substitutability

Working conditions

- Increased physical and/or psychological stress, increasingly blurred boundaries between work and leisure time, intensification of performance, stronger control through direct and indirect surveillance as workers and citizens
- Greater autonomy and time sovereignty, relieving aids (physical and psychological)

> *„Digitalisation broadens the possibilities for automation, robotisation and outsourcing in industries and services, and trade unions are challenged to shape the transition to fair and good digital work.*
>
> *The digital revolution will not happen overnight, but needs to be shaped step by step. The involvement of trade unions is a major challenge as well as an opportunity.*
>
> *The most important areas of actions for trade unions are employment, qualifications and upskilling, outsourcing of tasks, rules on working time, health and safety issues, work-life balance, and data protection. New inclusive definitions for worker and employer must be found. Strengthened information, consultation and board-level participation procedures are needed to shape inclusive transition towards fair digital work."*
>
> *ETUC resolution on digitalisation: "towards fair digital work"*
> *Adopted by the Executive Committee on 8-9 June 2016*

(Key questions relating to the design and structuring of good digital work)

Development and safeguarding of employment

- Company, collective bargaining and social initiatives
- Volume: product innovation - reduction of working hours
- Change: co-determination & participation - qualification (adaptation, transformation, innovation)

Designing and structuring work

- Labour policy model for the design of "Good Work" (healthy and competent ageing in employment)
- Protecting personality rights in the company and in society
- New forms of employment: How to regulate and design them: crowdworking, crowdsourcing, solo self-employment

Co-determination

- What extended co-determination rights do we need?
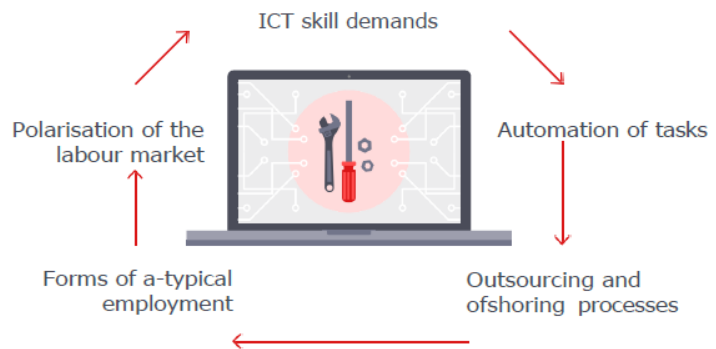- How can co-determination and participation interact successfully?

> *„It is our task as trade unions to point to some worrying trends and significant problems in the future of work.*
>
> *The main challenge is to shape an inclusive transition towards a fair digital future by minimising the risks and opening windows of opportunity..."*

ETUC resolution on digitalisation: "towards fair digital work"
Adopted by the Executive Committee on 8-9 June 2016

A Digitalising Services Industry

CHALLENGES TO THE LABOUR MARKETS DUE TO NEW COMPANY STRATEGIES

- ICT skill demands
- Polarisation of the labour market
- Automation of tasks
- Forms of a-typical employment
- Outsourcing and ofshoring processes

It is expected that job losses in the services sector will primarily affect the mid-skilled and mid-salary workforce. Considering an increasingly polarised labour market, there is broad agreement that crucial ICT skills will need to be complemented by broader cognitive and social skills.

UNI Europa
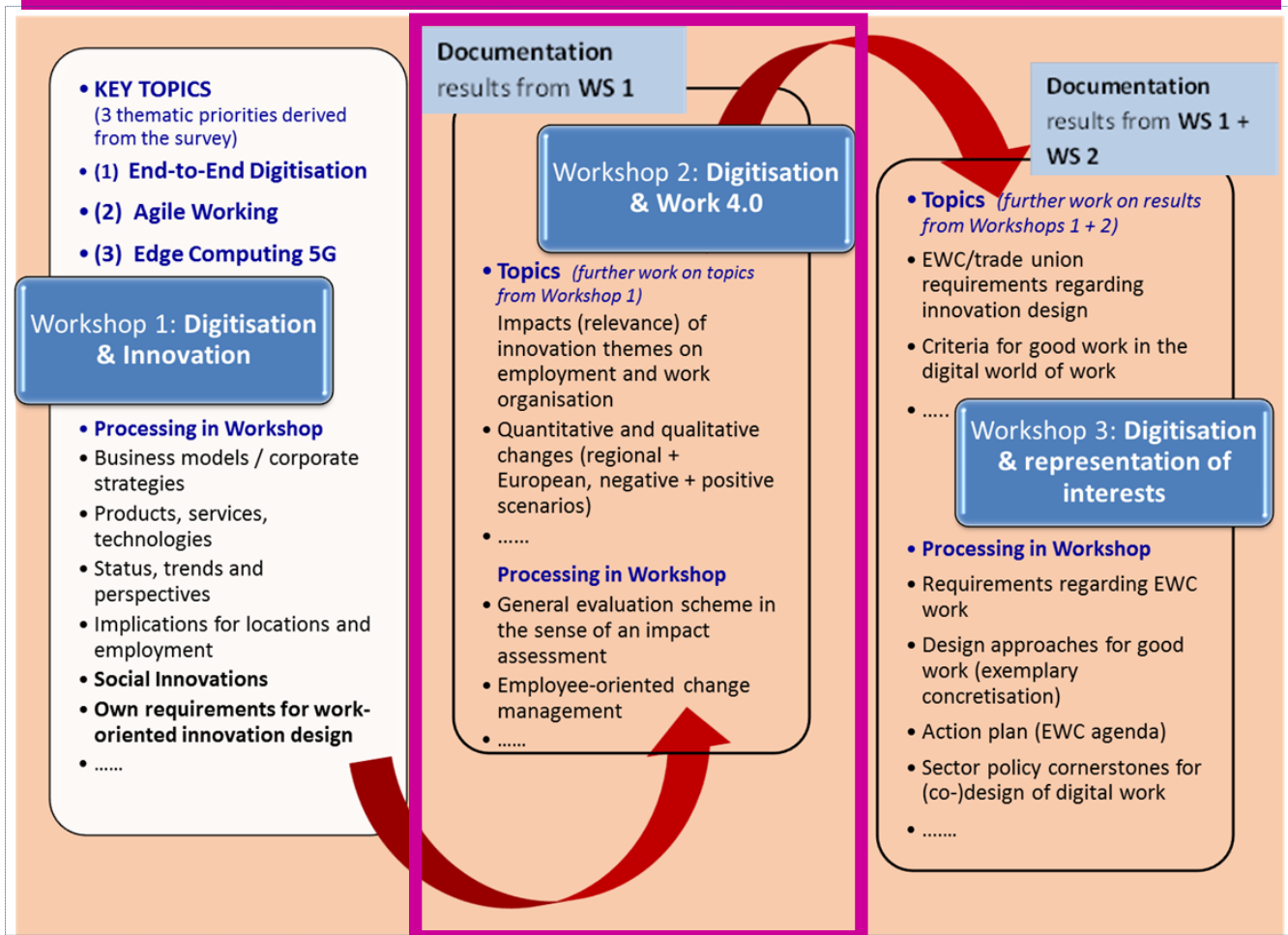*Shaping Industrial Releations in a Digitalising Services Industry*

OUR FOCAL AREAS

In the course of digitisation, transnational issues are increasing; they are becoming even more important and affect the work of all Group member companies. In our "Work 4.0" theme workshops, we will exchange ideas at a European level and work out our own requirements for social innovation in the interests of employees within the Deutsche Telekom Group.

In two votes taken (written survey and oral consultation in the EWC), the following 3 priorities were agreed by a large majority on the thematic priorities of the Work 4.0 workshops:

- **End-to-End Digitisation**
- **Agile Working**
- **Edge Computing 5G**

These focal points allow us to concentrate on the future and thus on business strategies and processes that have not yet been fully implemented and which therefore are open to employee-oriented participation.

OUR THEMATIC WORKSHOPS
INNOVATION --- WORK --- REPRESENTATION OF INTERESTS

- **KEY TOPICS** (3 thematic priorities derived from the survey)
- (1) **End-to-End Digitisation**
- (2) **Agile Working**
- (3) **Edge Computing 5G**

Workshop 1: Digitisation & Innovation

- **Processing in Workshop**
- Business models / corporate strategies
- Products, services, technologies
- Status, trends and perspectives
- Implications for locations and employment
- **Social Innovations**
- **Own requirements for work-oriented innovation design**
- ......

Documentation results from **WS 1**

Workshop 2: Digitisation & Work 4.0

- **Topics** (further work on topics from Workshop 1)
Impacts (relevance) of innovation themes on employment and work organisation
- Quantitative and qualitative changes (regional + European, negative + positive scenarios)
- ......

Processing in Workshop
- General evaluation scheme in the sense of an impact assessment
- Employee-oriented change management
- ......

Documentation results from **WS 1 + WS 2**

- **Topics** (further work on results from Workshops 1 + 2)
- EWC/trade union requirements regarding innovation design
- Criteria for good work in the digital world of work
- .....

Workshop 3: Digitisation & representation of interests

- **Processing in Workshop**
- Requirements regarding EWC work
- Design approaches for good work (exemplary concretisation)
- Action plan (EWC agenda)
- Sector policy cornerstones for (co-)design of digital work
- ....

Review of the Workshop 1
DIGITISATION & INNOVATION

END-TO-END DIGITALISIERUNG	AGILE WORK	EDGE COMPUTING | 5G
Potential: Using optimised processes to become more efficient!	**Potential: Taking advantage of opportunities for good digital work!**	**Potential: Employees can benefit from new products and services!**
Risks: Job changes, job losses, relocations (nearshore)	**Risks:** Self-exploitation, control, pressure to perform, working hours, stress and strain, etc.	**Risks:** Employees are not persuaded and systematically involved

A European framework for good working conditions, which can be adapted flexibly to future requirements and which can keep pace with the innovation processes in new business fields of activity

Definition of procedures for the co-design of end-to-end digitisation processes	**Development of a European defined, binding set of rules for agile work and guidelines for implementation** (with minimum standards, capable of being implemented locally)	**A breathing, living agreement: flexible design with a view to future innovations and products**
ARRANGEMENTS - Further development and qualification of employees for new requirements in all areas - Dealing with job losses (replacement jobs, new activities) - Protective mechanisms against increasing workloads - Dealing with changes in work and employment (home office, shared working) - Instruments that can also be used at local level and at European level	**ARRANGEMENTS** - Specification as to where agile work should be meaningful and introduced - Rules for less control and more own responsibility - Pegs for working time regulations and remuneration security - Co-designing roles and responsibilities - Strategic personnel planning (qualification, skill management) - Defining design options and co-determination structures	**ARRANGEMENTS** - Creation of guard rails to document regulatory issues - Compass for employee-friendly innovation design - Identifying growth areas; agree restructuring plan; fund for qualifications) - Integration of representatives of interests (in planning, development, implementation) - Development of a mutual trust culture - Continuous competence acquisition and knowledge building (life-long learning)

1. European DigiT-Workshop at 24./25.October 2018 in Vienna (Austria)

Employment and Work 4.0

Siniša Đuranović, Senior Vice President and General Counsel of Hrvatski Telekom

Employment and work 4.0

Siniša Đuranović, January 14th, 2019

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LIFE IS FOR SHARING.

„Our success depends on our ability to react and adapt quickly.

To this end, we rely on the following, among other things:

- *Strategic workforce planning: specification of future requirements for new or adapted job roles.*
- *Competence management: Identification of qualification gaps and development of a qualification matrix.*
- *Efficient working environment: strengthening teams and enabling agile flexible working models with digital tools.*

We combine our digital and technological expertise to achieve better performance, greater customer benefits and process simplifications, thus enabling work to be strengthened in the related areas.“

Mr Siniša Đuranović informs about the economic perspectives of the Croatian telecom and about the effects of digitalisation on work and employment.

Although the impact of new technologies on jobs is not yet fully predictable, some trends certainly are clearly foreseeable:

- New technologies will continue to change the world of work
- Increasing need to find new ways of working with innovative technologies
- Companies need their own strategy for addressing this skills gap.

How will innovative technologies change work and occupations?

Scenario 1: As a result of automation and robotics technology, workplaces and work contents will disappear completely. This applies in particular to administrative, manual and simple activities, e.g. in marketing and sales.

Scenario 2: There will be a net increase in jobs in the long run.

The real or realistic view is that automation will eliminate routine work, but it will not completely replace human work. The new digital technologies create new forms of work and new job profiles.

The remaining (current and future) jobs include higher-value jobs and require new sets of qualifications.

Digitalisation creates the conditions for transforming simple work into meaningful work.

Digital "Work 4.0" requires a significant change in skills and competences: increased demand for active learning, creativity and different forms of technological competences.

The defining elements of "Work 4.0" from the perspective of the Croatian Telekom are:

(1) **Variable forms of employment:** traditional full-time employment under a permanent contract is not the only and dominant form of employment relationship. In addition, there are new types of employment such as self-employment, freelance/project-related tasks and part-time jobs.

(2) **Flexible working models:** new, flexible working models appear necessary to support Work 4.0 requirements and employee needs: flexitime, homework, telecommuting, compressed working hours, job sharing, career breaks (sabbaticals)

(3) **Adjustments to labour legislation and work practice** to take account of changes in the working environment.

The lecture provided opportunities for lively discussion, with numerous questions being raised.

These focused on evaluating the changes that have already taken place as a result of digitalisation (including experience with retraining and replacement jobs, social plan regulations in the event of dismissal, experience with agile methods (tribes) with regard to recruitment, burdens, performance measurement, monitoring).

The Croatian employee representatives noted the insufficient information and communication provided by the employer. With regard to the implementation of agile methods, no discussions between works council and management have yet taken place. For the employee side, this is a "structural change" that must be discussed in advance with the employee representatives.

Employee representatives now expect to see an evaluation of the new working methods and the associated changes (e.g. on working hours, remuneration, pay regulations).

Fostering work & employment: Trade union challenges in the process of digital change

The Croatian Trade Union HST *(Hrvatski sindikat telekomunikacija)* **organises employees in the ICT sector.** The HST was formed as a trade union for telecom employees and has developed into an IT trade union with currently around 11,000 members.

The aim of trade union sector policy is to help shape the structural change in companies brought about by digitalisation in the interests of employees. Important successes include a collective agreement on Sunday and public holiday bonuses and regulations to limit excessive overtime. Because of the lower earnings and work income, it is difficult to arrive at regulations that will also be accepted by the employees.

Another area of contention is the structuring of the right to participate in the shaping of structural changes. Employers must inform employees in advance; in the event of dismissals, the works council has the right to veto a selection based on social criteria. The employer must apply uniform criteria and observe special protection provisions (e.g. for disabled persons). From the point of view of employee representatives, the social catalogue must be further differentiated and extended as a protective measure in the event of dismissals.

Digital structural change will revolutionise the existing forms of work and employment. Automation and digitalisation of internal business processes to increase productivity and reduce costs poses fresh challenges. **These must be dealt with both in terms of sectoral policy and by or within the works council.**

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Current trade union challenges include:

- **New atypical employment relationships** (temporary work, work on call and thus the transfer of responsibility and risks from the employer to the employee)

- **Delimitation and individualisation of work** (agile work as a form of flexibilisation and deregulation, permanent availability to the employer; security elements are required to protect the interests of employees)

- **Increase in crowdworking and home office** (work outside the workplace, no physical connections to the company, use of own work equipment)

Our position: trade unions do not oppose technological advances and new forms of employment relationships

- We want to participate constructively in the process of reconciling the interests of labour and the interests of capital in the course of changes in society and the world of work.

- New employment relationships must a ensure humane working environment – better living and working conditions

- Trade union organisation or unionisation of part-time workers, temporary workers and persons employed through online platforms must be one of the priorities for trade union activity.

- At the political level, "social lobbying" must be intensified in order to achieve socio-political support for these changes. For this reason, it is necessary to work at all levels to promote a state welfare policy that guarantees social standards and social security for vulnerable groups (people with disabilities, the elderly, the sick, the poor, etc.)

END-TO-END DIGITISATION

Why is this topic important?

The optimised, end-to-end digitalisation that is implemented across the board includes cross-sector effects on employees in the Telekom Group and the communications (TC) and information technology (IT) industry.

End-to-end changes the entire value chain, promotes the internationalization of services, and results in a reorganization of the current work and employment structures in the European telecom group. It opens up further possibilities for the liberalisation of work in the form of near & offshoring as well as the self-administration of the customer.

Operating end-to-end in European participations extends the value chain. In particular, near-shoring with (external) outsourcing partners in other European countries creates a competitive situation in terms of industry and sector policy for Telekom employees: While the telecommunications sector gains in terms of industrial and sector policy through the increase in work and employment, this has negative effects on operational policy because telecom-specific work is lost. Employee-oriented regulation is therefore crucial.

It is therefore necessary to take stock, in a differentiated manner, of the changes associated with end-to-end in order to carry out an opportunity vs. risk assessment. In the field of vision here: type and scope of employment, work content and job quality, working environment and working conditions.

OPPORTUNITIES
derived from end-to-end digitization

- Overall, new jobs will be created in the telecoms and IT sectors in Europe.

- Alternative employment opportunities, e.g. through new service offerings at Telekom.

- Using virtual reality glasses, even employees with inferior technical skills would be able to carry out complex technical activities under virtual guidance (consider regulations, e.g. on stress, pressures, etc.).

- Higher-value jobs will be created.

- Qualification for higher-value activities.

- Greater flexibility of skilled workers in the labour market.

- An opportunity for employees to carry out more demanding jobs.

- Potential for working time reductions.

- Distributing remaining work amongst more employees (reduction in working time also in the form of additional days off).

- The elimination of standard, routine tasks creates resources (including employment) for individual customer care.

- Project work in sub-process chains up to the complete error-free implementation

RISKS
arising from end-to-end digitization

- If there are no changes in the qualification and in the higher-value jobs, then the Telekom employees will be the losers in these fields.

- Automation reduces employment in the sub-process chains.

- Substantial parts of the standard business and thus the associated employment are eliminated.

- No alternative employment opportunities.

- Loss of income

- Less work (volume & jobs). Relocation and shifting of work becomes easier.

- Higher qualifications are required and simpler tasks will be eliminated. This will create a widening gap between more highly qualified tasks and the elimination of simpler ones. The elimination of simpler tasks will lead to fewer permanent employment contracts. The assignment of TC & IT services to subcontractors (outsourcing partners) and self-administration by customers means that jobs will be eliminated within the Deutsche Telekom Group. Growing potential for crowd-working and bogus self-employment.

- Reduction of tasks due to artificial intelligence (AI). There will be compressed work content for employees. Not all employees can be trained for new jobs. In the sub-process chains, the development of end-to-end digitalisation leads to greater work density and workloads. After full implementation, jobs will be eliminated.

- The extension of the value chain to include different countries (partly with outsourcing partners) can lead to different wage pressures.

FROM THE DISCUSSION OF WORKING GROUP 1

Evaluation and conclusions

Based on the premise that end-to-end digitalisation is transnational in nature, European employee representatives expect Deutsche Telekom's management to involve the European Works Council. The aim is to reach a European agreement on minimum standards.

With regard to the scope and types of employment, the EWC members are of the opinion that the end-to-end digitization of the sub-process chains must take place within Deutsche Telekom and not with outsourcing partners. Rationalisation gains must be partly invested in personnel (e.g. as training allowances).

Redundant employees must be offered other jobs within Deutsche Telekom.

The protection of workers against redundancies and loss of income must be ensured.

For employee participation in the end-to-end digitalisation process, it is expected that the experience, creativity and new ideas of the employees can be introduced before the company decisions are made. To this end, employee participation must be integrated.

The company must develop clear job profiles, prerequisites and training plans. The skills employees will need to deal with new work content must be strategically developed in the company (e.g. for web design, programming, robotics etc.). The prerequisites for new jobs or new job profiles in the end-to-end process must be created through qualification and training.

Minimum standards must be created for employees within a continuous process, independent of the workplace.

Members of the WG 1

Zaira Floridia (DE), Carlos Soriano (ES),
Josè Carlos Hernandez (ES), Sophia Reisecker (AT),
Lothar Holzwarth (DE)

As far as the work of the European Works Council (EWC) is concerned, this will mean:

- **Demands on Deutsche Telekom's management to report on the end-to-end digitalisation process in the relevant process chains.**

- **Establishment of a(n) EWC working group to analyse national and company regulations with the aim of establishing minimum standards for end-to-end.**

- **Development of an EU-wide skills catalogue and its systematic implementation with appropriate monitoring mechanisms.**

- **Cooperation and exchange with other EWCs and European institutions. Strengthening international solidarity and making the European dimension of end-to-end digitalisation visible along with its country-specific characteristics.**

- **EBR understanding to formulate self-confidently that it stands for the context: to be the engine driving the success of the company while standing up for the rights of employees at the same time.**

AGILE WORKING

Why is this topic important?

Agile working for a project or a product means that it is produced in small steps and in tandem with a team that organizes itself. Essential principles of agile work were first defined in the Agile Software Development Manifesto 1999 (2001). Central values that define the way work is done in agile teams are therefore:

- Individuals and interactions rather than processes and tools
- Functioning software rather than just comprehensive documentation
- Cooperation with customers rather than contract negotiation
- Responding to change rather than following a plan.

This method of working is intended in particular to ensure that companies can react flexibly and at short notice to customer requirements, align the development process consistently with the needs of the customer and at the same time significantly shorten the development time and thus the time-to-market interval for successful ideas. Characteristics of agile work are:

- Self-organising teams with regular exchange and transparency of work
- Teams have more personal responsibility and decide together on the next work steps and division of tasks in the team
- Customer benefit is at the centre of all activities and is reviewed regularly
- Working in project teams rather than in the classic line hierarchy.

At present, no precise information is available on the extent of the spread of agile work at Deutsche Telekom. Deutsche Telekom (Group Board of Management), in particular Claudia Nemat's Board of Management division, intends to significantly expand agile working methods. The aim is to accelerate the development processes. A short survey of the EWC members present showed that agile work takes place in several countries (Germany, Croatia, Hungary, Spain). At the same time, it became clear that Telekom uses the term "agile work" to refer to very different situations. In part, it represents a "fashionable term" for a flexibilisation of work processes and work relationships in line with employers' interests. Differentiated stocktaking is therefore necessary. It is to be assumed that this topic will gain in importance in the future in most European Telekom companies.

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POTENTIALS
of or arising from "Agile Work"

Agile work with good framework conditions for the individual and the team can lead to an improvement in working conditions.

Specifically, the following potential is perceived:

- extended temporal and technical scope for action in the distribution and execution of the work

- mutual learning processes in the team

- less work disturbances due to concentration on a single task, increased transparency and better communication

- Identification with the activity through consistent orientation towards customer benefit

- Time-related balanced working

DESIGN
of or arising from "Agile Work""

The potential for "Good Agile Work" will only be realised if essential framework conditions are fulfilled.

The list is not exhaustive; it includes the following:

- adequate staffing, enabling a sustainable pace without extra work and with breaks

- Good planning of work tasks and the associated effort (experience, composition of teams) with the involvement of all team members.

- Relieving teams of line tasks while they perform project work. No access by line managers to team resources for other work.

- Reflection loops for continuous improvement of current and future projects. In doing so, essential questions and aspects from the point of view of the employees, such as the stress situation, required qualifications, communication in the team, adequate resource planning, must also be taken into account.

- Good organisation of agile work through team access to necessary personnel, space and material resources at work (empowerment)

- Preparatory qualification of all managers and team members in agile working methods

If these conditions are not or are only insufficiently guaranteed, then the opportunities listed above cannot be exploited and at the same time negative effects on the quality of working conditions may be induced:

- **Excessively high demands in terms of work performance, with negative consequences for the mental health of the employees (overtaxing work performance, continuous additional work in order to complete tasks on time)**

- **"Pillory" effects among employees through performance comparisons, in particular when the team or individual team members are continuously overstretched in terms of technical or time aspects**

- **Company regulations and working cultures that have a counterproductive effect on work in agile teams (individual target agreements, competitive thinking).**

FROM THE DISCUSSION OF WORKING GROUP 2

The rules on co-determination at company or collective level should therefore contain standards for "Good Agile Work". Items called for in this regard:

- Stocktaking of current and planned management activities on agile working: Scope, areas of application (tasks), employees involved, rules for designing and structuring agile work, employees' experience with agile working methods

- Specifications as to where agile work can be introduced in a meaningful way

- A European-defined, binding set of rules for agile work with references to these topics:

  o Appropriate performance conditions: personnel allocation, task structuring, competence mix, buffer potentials

  o Control mechanisms: avoid improper transfer of responsibility for achieving results.

  o Structuring of working time: avoiding overtime hours, allow breaks/short breaks, time out between sprints

  o Securing access rights to personnel, material and spatial resources

  o Decision options for the teams: Distribution of tasks, resource requirements, reflection on one's own working conditions

  o Composition of the teams: number, selection of persons, roles and tasks in the team

  o Remuneration certainty

  o Co-determination structures in agile work

  o Qualification for agile methods

  o Guidelines and procedures for the introduction of agile   methods

Members of the WG 2

Sibylle Spoo (DE), Wolfgang Anlauft (DE), Vesna Mamic (HR), Marko Palada (HR), Victor Vanek (HR)

EDGE COMPUTING | 5G

Why is this topic important?

Edge Computing, as opposed to Cloud Computing, means decentralised data processing on the network periphery, the so-called Edge. Edge Computing is based on an open, distributed IT architecture shaped by decentralised processing of data. Not only does Edge Computing provide the basis for Mobile Computing, but also for the technologies of the Internet of Things (IoT). Edge Computing de facto means that data from a (mobile) device, a local PC or a server is processed directly without any data being transferred to a data centre.

Edge Computing and 5G.

All IoT applications, for example in the field of vehicle-to-vehicle communication, public safety and sensor networks in smart cities, require device-to-device connectivity which is more reliable and scalable than what is offered by current LTE networks. (…) This illustrates that Edge Computing will play a particularly important role for the 5G network, in order to ease the strain on the 5th-generation network. After all, Edge Computing means that huge volumes of data, which are generated by a large number of connected (IoT) devices, are processed right on the network periphery. This means that the data is processed right where it is produced, rather than routing data traffic via a remote data centre first. Edge Computing consequently reduces latencies significantly, which makes it a critical success factor for 5G scenarios

Worldwide 5G development at a glance

China
A few years ago, China already established a "5G Promotion Group" - where telecommunications companies, ICT companies, universities and research institutions work together on the development of 5G.
China wants to play a pioneering role in 5G both technologically and in network upgrades(nationwide roll-out of 5G by 2020 is planned) and is also actively involved in the formulation of standards.

South Korea
As one of the pioneers for 5G, South Korea already put a 5G test network into operation during the 2018 Olympic Winter Games in PyeongChang. There have been 5G initiatives and several successful 5G field trials since 2013. A commercial launch of 5G is also expected in South Korea in 2020.

Japan
A 5G test network went into operation in 2017 in the Tokyo area with the aim of testing the performance of 5G in live operation.
Japan plans to have a nationwide 5G network up and running by the 2020 Summer Olympics.

USA
The four major US telecommunications companies are working actively together with ICT companies on 5G standardisation. The government also launched a research initiative a year ago and the FCC regulator is already offering test frequencies for 5G. A commercial launch of 5G is also expected in the USA in 2020.

Sweden
In Europe, Sweden is one of the 5G pioneers; there have already been several successful field trials and in 2018 Stockholm, as the first capital in Europe, is to receive a 5G test network.

Germany
In 2016, the German federal government adopted a 5G strategy and established a 5G dialogue forum for the purpose of networking between research institutes, telecommunications companies and industrial partners. Germany wants to become a global leader in 5G applications in particular and has already successfully rolled out test fields for autonomous driving on motorways (e.g. on the A8 near Munich). Moreover, Vodafone Germany also opened the world's first 5G test centre in cooperation with the University of Aachen in Aldenhoven at the end of August 2017. In addition - following a nationwide beauty contest run by the industry association BITKOM - the first real digital city will be established in Darmstadt.

5G strategy in Austria

Phase 1: The first pre-commercial 5G test setups are to be implemented by mid-2018.

Phase 2: By the end of 2020, the interim goal of almost nationwide availability of ultra-fast broadband connections (100 Mbit/s) is to be achieved. This will lay the foundations for the nationwide upgrade to 5G. At the same time, 5G is to be launched in all federal state capitals.

Phase 3: By the end of 2023, 5G services are to be available on the main transport links and by the end of 2025, the goal of virtually nationwide availability of 5G is to be realised.

*Aus: 5G-Strategie, Österreichs Weg zum 5G-Vorreiter in Europa
(bmvit – Bundesministerium für Verkehr, Innovation und Technologie, April 2018)*

FROM THE DISCUSSION OF WORKGROUP 3

Edge Computing|5G opens up new technological possibilities (campus networks, machine-to-machine). However, 5G is not only a technological and European topic, but must be evaluated in relation to new business models.

Edge Computing and 5G will result in many changes, see the examples of Facebook or Amazon: the network infrastructures are provided by Telekom - benefits and profits are accumulated by other digital companies.

We must deploy 5G in such a way that content and profits remain with Telekom, thus ensuring employment security.

5G gives us the opportunity to move up the value chain. To this end, decisive questions need to be resolved, such as: which alliances must Telekom enter into in order to participate in the new business models (e.g. in the area of autonomous driving)?

In order to be successful as a company, we need extended forms of cooperation, e.g. joint innovation centres (with producing companies for the development of new applications) and sustainable cooperation with specialist institutes and universities (example here: Audi in Hungary).

These business and strategic changes will have an impact on existing working relationships. This is why an impact assessment on work and employment in the company is necessary: based on previous experience, it is feared that short-term employment relationships will increase at the expense of open-ended employment contracts and thus job security in the company.

Members oft he WG 3

Odysseus Chatzidis (DE), Doris Rübeling (DE), Erszèbet Zsoltné Varga (HU), Szolt Tamas Nagy (HU), Péter Szabó (HU), Attila Bujdoso (HU)

Our expectations and objectives

One indispensable principle is:
Changes must be shaped with input from own employees. The aim is to take as many employees as possible into the 5G world. To this end, we need a regime of systematic change management, together with a bundle of measures to promote employment (such as retraining, re-qualification, implementation assistance, mentoring).

This results in additional requirements for strategic personnel planning in the company:

More detailed job profiles with medium-term qualification needs for 2-3 years are necessary. The qualifications of the employees must grow alongside the changes. Employees must be re-qualified and further developed in order to achieve permanent employment.

As long as the specific requirements relating to EC|5G development are still unclear, it is necessary to invest with foresight in competencies and human resources.

Management is expected to provide information continuously and to involve employee representatives in these plans.

First conclusions for EWC representation of interests

The new technological potentials arising from Edge Computing|5G are already being realised.

Initial developments - such as a test track for autonomously driving cars in Hungary and VR glasses for service technicians in Germany - deliver proof of this. The new direction for business has been set and must not be allowed to pass employee representatives by.

Change must only take place if we are party to it.

While we as a(n) EWC are being informed and can formulate position papers, in the past we have not succeeded in developing our own alternatives with a European work design option to an adequate degree.

Our goal as a(n) EWC in the upcoming   developments on the way to 5G:

Change. Together with us.

PARTICIPANTS AT THE WORKSHOP 2   (January 2019)

WORK-SHOP 2	Participants	14.01. - 15.01.2019	ZAGREB (Croatia)	
Country	**Surname**	**Name**	**Division Telekom / Trade Union**	
Austria	Reisecker	Sophia	ÖGB/GPA-djp	
Croatia	Mamic	Vesna	Hrvatski Telekom d.d.	
Croatia	Palada	Marko	Gewerkschaft HST	
Croatia	Vanek	Victor	Hrvatski Telekom d.d.	
Germany	Floridia	Zaira	Deutsche Telekom Kundenservice GmbH	
Germany	Rübeling	Doris	Deutsche Telekom Technischer Service GmbH	
Germany	Chatzidis	Odysseus	T-Systems International GmbH	
Germany	Spoo	Sibylle	ver.di (Partner) + UNI EWC coordinator	
Hungary	Varga	Zsoltné	Magyar Telekom Telekommunications	
Hungary	Szabó	Péter	T-Systems Magyarorszag Zrt.	
Hungary	Nagy	Szolt Ta-mas	IT Services Hungary Szolgaltato Kft.	
Hungary	Bujdoso	Attila	Gewerkschaft TAVSZAK	
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Spain	Hernandez	Jose Carlos	CCOO Servicios in T-Systems	
Germany	Brenneke	Gisbert	Arbeit und Leben Bielefeld	
Germany	Gutbrod	Klaus	Arbeit und Leben Bielefeld	
Germany	Holzwarth	Lothar	Betriebsräte- und Managementberatung	
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Germany	Dautermann-Hargitai	Antonia	Interpreter DE >< HU	
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EUROPÄISCHE PARTNERSCHAFT

Projektträger & Mitantragsteller (Strategische Partner)

DE	Arbeit und Leben Bielefeld e.V. (DGB|VHS)	Arbeit und Leben Bielefeld e.V. DGB|VHS
DE	Europäischer Betriebsrat (EBR)	European Works Council (EWC) Deutsche Telekom	EBR	EWC Deutsche Telekom
AT	ÖGB, Gewerkschaft der Privatangestellten, Druck, Journalismus, Papier (GPA-djp)	GPA djp GEWERKSCHAFT DER PRIVATANGESTELLTEN DRUCK – JOURNALISMUS – PAPIER
HR	Hrvatski sindikat telekomunikacija	HST HRVATSKI SINDIKAT TELEKOMUNIKACIJA
ES	Commissiones Obreras, Federación de servicios	CCOO servicios

Assoziierte Organisationen (Operative Partner)

BE	UNI Europa	UNI europa global union
DE	Vereinte Dienstleistungsgewerkschaft	ver.di
PL	NSZZ "Solidarnosc" T-Mobile Polska S.A.	NSZZ SOLIDARNOŚĆ
HU	Tavközlesi Szakszervezet	TÁVSZAK Távközlési Szakszervezet
GR	Greek Telecom Employees' Federation	OME·OTE
RO	SINDICATUL NATIONAL din TELECOMUNICATII	Sindicatul Liber Din TeleComunicatii

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