

DIGI GEN

Professional career guidance for women in management positions in the field of digital competence

LITERATURE REVIEW

Hungarian Report

The European Commission support for the production of this publication does not constitute an endorsement of the contents which reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



**Co-funded by
the European Union**

CONTENT

1	Introduction	2
2	Women and leadership.....	2
3	Digitalisation and leadership.....	5
4	Women, leadership and digitalisation.....	10
5	Summary.....	11
	References	12



1 INTRODUCTION

The DIGIGEN project focuses on professional career counselling for women in leadership positions regarding digital competence development by HR professionals and career counsellors. With focus on Hungary, the aim of this report is to map the circumstances in which the project is launched. Besides statistical data, this review is based on descriptions of governmental and NGO programs and relevant scientific papers.

2 WOMEN AND LEADERSHIP

Even though the proportion of women managers in Hungary (39%) is above the EU average of 34% (European Commission 2021a), there's still room for development. Takács (2020) attempted to uncover the reasons why women still seem to be underrepresented in top management positions in spite of being increasingly qualified. She has found a strong correlation with rigid structures and traditions in many enterprises. Women also have to struggle more than men to find a balance between private and working life and they possibly have to face a sexist work environment as well. Liptay (2021) found in a company-wide research that for half of the female managers, work-life balance is the most important criterion towards employee satisfaction. In terms of skills required for success, Hungarian executives considered building a personal networks and strong communication skills more important than the world average. Their worst fear was losing their jobs due to automation. Kézai et al. (2020) explored the role of women in the startup world by providing a comprehensive picture of the state of female-led startups and factors affecting their operations in today's Hungarian startup ecosystem. They revealed several limiting factors that hinder female-led startups. These, too, are typically due to family and social

reasons. Furthermore, women are exposed to the phenomenon of the glass ceiling in the workplace. Education is considered most important in these circumstances. In accordance with these findings is the article of Klára Tatár-Kiss (Tatár-Kiss 2021) who conducted a survey in 9 countries that regards the gender differences between a US holding company and its international subcompanies. Hungary was the most masculine country among the survey participants, with a masculinity-index of 88. According to Hofstede, founder of the idea, a masculine society is determined by the spirit of competition, is striving for success, people live to work, material goods are very important, conflicts are handled by aggression. It is highly required in management positions to be self-confident, capable of making decisions, and to give directions. The study refers to Rudman-Glick, who points out that in case a woman gets in a leader role in a masculine society, she automatically has to take on masculine leading attitudes. The amount of female workforce in the former socialist countries, especially in the financial sector is the highest, but they are seldom in a leading role. In comparison Sweden, France and Spain, which are feminine countries, have more women in leading positions. The final conclusion is, that even if the company culture regulates many processes, the feminine or masculine atmosphere of a subcompany is mainly affected by the national culture.

The action plan (2021-2030) of the Hungarian government with the title "*Consolidation of women's role in the family and in the society*" forms several goals to promote women especially in poorer regions and in minority communities (Magyarország Kormánya 2020). Part of the plan are projects like the VEKOP-Project, which motivates young adults with 4,5 million forint not refundable financial support to found their own company in Hungary. 47% of the supported companies by July 2020 were managed by women. The study points out that in Hungary the salary between male

and female workforce shows a shrinking difference, the gender pay gap is claimed to be the lowest within the EU. In 2018 the government started a new programme for women with the ambition to take part in public life. The program focuses on the importance and influence of women in economy, society and public life. It combines education and practice, participants can meet important national and international personalities, managers, politicians and experts. The DESI Index shows a small number of female employees in the IT-sector. They are also underrepresented in economy, science, professional training and politics. One aim is to increase the proportion of women in these fields, by motivating them with further training, mentor programs, and qualifications. There are also programs to educate the digital competences especially of women. It would be inevitable to build in digitalisation in adult education. There are two concrete goals to encourage women in jobs where they are underrepresented: by career counselling in secondary schools and advertising for mathematics, life-sciences, technical sciences and informatics by making scientific life more attractive with scholarships and prizes especially for women (Magyarország Kormánya 2020).

The Hungarian Business Leaders Forum founded in 2005 a dedicated Forum of Women in Leading Positions to open a dialogue between female leaders and top-managers in economic and political life in Hungary. Group members are women in executive positions. The Forum organizes professional events in Hungary and abroad, which offer a platform for networking and tries to build out more female leaders with a mentor program. (Hungarian Business Leaders Forum s. a.)

Hungary also took a leading role in the ifempower project of the European Commission that aimed to empower females to get engaged in self-employment and entrepreneurship (HÉFTA 2022).

3 DIGITALISATION AND LEADERSHIP

Recent statistics show that Hungary is still behind in digital development not only compared to other EU-countries (European Commission 2021b) but also by global standards (International Institute for Management Development 2021). Even so, Hungary is one of the top risers in the field of digital transformation in Europe (European Center for Digital Competitiveness 2021), a fact that assumes the possibility of dynamic development in the field.

Researchers of the Corvinus University Budapest examined the DESI Index (Digital Economy and Society Index) of Hungary to get an overview of the current status of digitalisation in the human capital sector (Tóth-Kaszás et al. 2021). 22 percent of the Hungarian population does not have digital skills, 25% has minimal knowledge, 25% has basic knowledge and 28% has outstanding knowledge. This is lower than the EU average. More than 60% of the workforce used a computer for work, which is also far from the EU average. This means that the Hungarian population is not yet ready for the digital transformation, there is a lot to do in terms of education for the workforce and a transformation of companies. (Tóth-Kaszás et al. 2021) Digital knowledge is mainly limited to user skills. The main access to digital knowledge is through school education or by self-tuition. There are still difficulties to adopt ICT systems and the new approaches to the daily educational routine (Pécsi Tudományegyetem 2017). This is why digital development cannot succeed without the support of educational

institutions. In 2017 companies complained that graduates lack mathematical-statistical competences, the ability for analysing and solving problems, self-reliance and the self-marketing of own ideas (Nagy, 2017). The education has to develop from 3.0 to 4.0. Which means a combination of real and virtual information, the usage of new virtual resources, like VR-headsets. This new digital learning environment requires cooperation between companies and universities. This virtual learning space can also be used to educate employees. Schools and universities have not only to focus on technical and professional skills but also on soft skills, like team spirit, critical thinking, communication skills, time management etc.. (Tóth-Kaszás et al. 2021) The labour market has changed a lot since the global economic crisis in 2008, it is more and more demand-oriented, with a growing value of soft-skills. Nearly all professions need digital knowledge. (Pécsi Tudományegyetem 2017).

Regarding the business sector, nearly all Hungarian businesses had internet connection (94%) by 2020, 63% had their own homepage. 23% of the total income of all Hungarian companies came from electronic commerce. The integration of other digital technologies such as 3D-printers was extremely low (3% of the companies). Only 6% used big data analyses for business purposes. Internet of Things (IoT) was utilized in 14% of Hungarian enterprises. Artificial intelligence such as chatbots were used merely by 1,5%. (Központi Statisztikai Hivatal 2021). Companies offering comprehensive services to aid the digital transformation in all sectors are present in Hungary as well (SAS 2022, Trend FM 2022). As cloud-based technologies begin to gain ground, the spread of digital service management is forecast (Portfolio 2022).

The research project of Obermayer et al. (2021) revealed attitudes and perceptions of business leaders towards digital transformation and Industry 4.0. It's reported that

even though there is lot of uncertainty and unease about the upcoming changes, companies are becoming more confident and ready to adopt the new technologies in the course of proceedings. The diversity of IT systems, data protection concerns and high costs stand in the way of digitization. Bencsik (2021) perceived similar manager attitudes in her study but she also reports a lack of enthusiasm and motivation regarding the changing work environment.

Szloboda Gábor, the managing director of Idya Hungary, a company that specializes in digital processes, points to the human factor as a key to successful transformation. Not only managers but every co-worker has to be convinced that the new technologies will make their worklife easier (HRPower 2022). Focusing on the agricultural sector, Olga Berta (Berta 2018) has drawn similar conclusions from her study: *“without the IT training of agricultural enterprises and their managers, the persistence of these deficiencies will mean long-term competitive handicap (...). If the owners and those in charge of management do not take the competition in the application of IT devices in global agriculture into consideration, it will have harmful effects on their economic efficiency and profitability”*.

A paper (Móricz 2022) analysing data from a 2019 survey that investigated the competitiveness of Hungarian companies focused on leadership preparedness, awareness and planning, skills and resources, and openness and responsiveness factors of the digitalization readiness. The majority of the companies (63%) saw themselves as fully prepared for the digital transformation. The others lacked either digital awareness or the necessary resources (in terms of budget and technology). The survey found that expectations were very high regarding the implementation of digital strategies but this doesn't necessarily mean that the presented strategies were all sound.

A key moment here would be to determine specific measures instead of merely defining general goals. The most successful areas of digital development were customer relationship management and information systems for decision support (DSS). The author notes that this survey has concluded before the outbreak of the COVID-19 pandemic which is widely believed to be a most relevant factor in speeding up digitalisation measures especially in the field of remote working.

The importance of digitalization strategies among Hungarian retail companies was shown in Matyusz & Pistruj 2020. The authors found that the companies analysed in their study also had access to underlying technological tools. An important finding is that the leaders of Hungarian companies have to broaden their horizons in order to achieve digital success, the sole arrangement of allocating financial resources will not be sufficient. It is recommended in the paper that the management should appoint a person in charge of implementing the digitalisation strategy. Marciniak et al. (2020) also suggest that there should be management positions dedicated to digital transformation. In a paper from 2020 (Hortoványi et al. 2020) the authors investigated whether Hungarian executives are prepared for the impact of digital transformation on workplaces. While conducting the survey, business executives perceived labour shortage, but few realized that the 'low/medium value-added low-wage' model was no longer sustainable. The results also indicate that there is significant employee resistance to digital transformation and managers are not prepared for the change management tasks. They believe that the key is to educate leaders capable of managing digital transformation by developing, disseminating, educating and operating model practices, curricula and incentives.

In a paper addressing the topic of the influences of the digital transformation on the HR-sector (Poór et al. 2019), the authors describe the results of their survey from 2018, in which HR managers (57%) and workers from other positions (43%) took part from overall 259 Hungarian companies. In contrast to global trends, the authors have found that the majority of the Hungarian respondents consider the conversion of the management as the key element, whereas organization development was considered less important. The authors concluded that the Hungarian HR branch is well aware of the fact that digitalisation is about to cause significant changes in human resources management. There is common consent regarding the main areas for development: lifelong learning, adjustment and personal growth within the organization.

Realizing the significance of digitalization, the government of Hungary has launched in 2015 a program to aid citizens and businesses in the process of digitalization (Digitális Jólét Program / Digital Success Programme). A follow up measure is a strategic framework (DJP2030) for international cooperation and digital governance (Magyarország Kormánya 2022). End of May 2022 the establishment of a new organization called Digitális Magyarország Ügynökség (Digital Hungary Agency) was announced, with the main task of the digitalization of the government and the creation of digital citizenship (Magyarország Kormánya 2022b).

A non-governmental organization (IVSZ) facilitating digital transformation in order to achieve competitiveness in business proposed a strategic plan on a broad range of fields of action. One of the main areas of these recommendations are the education and skill development of human resources regarding digitalization (Informatikai, Távközlési és Elektronikai Vállalkozások Szövetsége 2022).

4 WOMEN, LEADERSHIP AND DIGITALISATION

Female managers agree that digitalization helps women to progress in their careers. The internet and smartphones help them to keep the balance between family and work life. The biggest challenges in Hungary are the lack of qualified and talented employees, technological development and the rapidly changing regulations, which is not a gender specific problem (KPMG Hungary 2018).

But digitalization also has its negative side effects. A survey (Nagy 2020) among twenty female senior managers on how mobile devices affect their work-life balance showed that it is even harder for them to put their mobile devices aside when they finish work as it is for their male colleagues. The long maternity leave, which was established in the last decades of socialism and the social pressure that as mothers they are the main care-holder for their family in combination with a high-commitment career can cause guilty conscience. This can explain why the advantages of mobile technology are rated higher than the disadvantages. They generally do not see it as a burden, if they are disturbed in their spare time or during the holiday, it is rather seen as legit part of their well-paid job. Working mothers feel pressure on themselves to succeed in work and within the family. They use their cell phones to be available for distant-mothering and also to show interest and responsibility for work even after their working hours have ended. In contrast they seldom use ICT for private purposes during working hours and mainly to organize family life, which is still women's responsibility. This way companies can colonize space and time, which was reserved for family life (Nagy 2020).

If we take a look at the companies in Hungary, there are several initiatives for women in the IT-sector. There is a cooperation between Vodafone Hungary, Lenovo and

BookR Kids with the aim to make female employees visible, to show girls the possibilities in the IT-sector and to break down existing stereotypes. Vodafone's target is to make 40% of the management out of women by 2030. Currently 15% of the startupperes are female in Hungary, and only 9% is the quote of the female executive in the technology sector. Huawei also does a lot for female employees, e.g. the SEED grant in Hungary, which prioritizes female engineers against their male counterparts (Kotroczó 2021).

5 SUMMARY

This review concludes that the Digigen project can fill a gap in Hungary and that it also has a beneficial situation as a starting point. There's certainly an awareness of the problems of digital transformation on one hand and career development of female managers on the other – this is established in various programs and projects launched by the Hungarian government and the private sector. Still, unfavourable personal attitudes, rigid structures and the lack of appropriate education can also be observed. These factors could be positively influenced by appropriate and specific counselling, for which this report has not found any common practice in Hungary. Apart from appropriate qualifications and preparation for the digital transformation, a most important element would be to address the balance between work and private life of women in order to build a confidence that they can achieve a breakthrough even in adverse conditions. Then, according to this review, women in Hungary do have the right skills and in most of the time, even qualifications, they just need help and support to make the most of them.

REFERENCES

- Bencsik, Andrea (2021) Vezetői felkészültség felmérése a digitális kor kihívásaira. Nemzetközi összehasonlítás. Vezetéstudomány - Budapest Management Review, Vol. 52. Issue 4. p. 93-108. Accessed 24 June 2022 <https://doi.org/10.14267/VEZTUD.2021.04.08>
- Berta Olga (2018). Információs technológiák használata a magyar mezőgazdasági vállalkozások menedzsmentjében: avagy egy digitális agrárgazdasági kutatás eredményei = Information Technology Use and Management of Hungarian Agricultural Enterprises: The Results of a Digital Research Project. Gazdálkodás Vol. 62. Issue 4 p. 337 – 352. Accessed 24 June 2022 <http://dx.doi.org/10.22004/ag.econ.276215>
- European Center for Digital Competitiveness (2021). Digital Riser Report 2021, Berlin. p. 20. Accessed 24 June 2022 https://digital-competitiveness.eu/wp-content/uploads/Digital_Riser_Report-2021.pdf
- European Commission (2021a). The life of women and men in Europe 2021. Interactive Edition. Accessed 24 June 2022 <https://doi.org/10.2785/976803>
- European Commission (2021b). Digitalisierungsgrad der EU-Länder gemäß dem Index für die digitale Wirtschaft und Gesellschaft (DESI*) im Jahr 2021. Statista. Statista GmbH. Accessed 24 June 2022 <https://de.statista.com/statistik/daten/studie/1243006/umfrage/digitalisierungsgrad-der-eu-laender-nach-dem-desi-index/>

HÉTFA Kutatóintézet és Elemző Központ (2022): Az Erasmus+ disszeminációs konferencián bemutatták a HÉTFA által vezetett ifempower projekt eredményeit. Budapest. Accessed 24 June 2022 <https://hetfa.hu/2022/06/21/az-erasmus-disszeminacios-konferencian-bemutattak-a-hetfa-által-vezetett-ifempower-projekt-eredmenyeit/>

Hortoványi Lilla; Szabó Zsolt Roland; Nagy Sándor Gyula et al. (2020). A digitális transzformáció munkahelyekre gyakorolt hatásai – Felkészültek-e a hazai vállalatok a benne rejlő nagy lehetőségre (vagy a veszélyekre)? *Külgazdaság* Vol. 64. Issue 3-4 p. 73-96. Accessed 24 June 2022 <https://doi.org/10.47630/KULG.2020.64.3-4.73>

HRPower (2022) Nem állnak jól a magyar cégek a digitalizációban, de a járvány fellendítheti a törekvéseket. Budapest. Accessed 24 June 2022 <https://hrpwr.hu/cikk/nem-allnak-jol-a-magyar-cegek-a-digitalizacioban-de-a-jarvany-fellenditheti-a-torekveseket>

Hungarian Business Leaders Forum (s.a.): HBLF Női Vezetők Fóruma. Accessed 24 June 2022 https://hblf.hu/tevekenyseg/programok/hblf_noi_vezetok_foruma

International Institute for Management Development (2021). Länderranking zur digitalen Wettbewerbsfähigkeit weltweit im Jahr 2021. Statista. Statista GmbH. Accessed 24 June 2022 <https://de.statista.com/statistik/daten/studie/1284906/umfrage/laenderranking-zur-digitalen-wettbewerbsfaehigkeit-weltweit/>

Informatikai, Távközlési és Elektronikai Vállalkozások Szövetsége (2022). Összefogás a digitális Magyarorszáért. Budapest. Accessed 24 June 2022 <https://ivsz.hu/wp-content/uploads/2022/06/Osszefogas-a-digitalis-Magyarorszagert-teljes-valtozat.pdf>

Kézai, P. K., & Konczosné Szombathelyi, M. (2020). Nők a startup-vállalkozások világában Magyarországon. *Vezetéstudomány / Budapest Management Review*, Vol. 51. Issue 10, p. 51–62. Accessed 24 June 2022 <https://doi.org/10.14267/VEZTUD.2020.10.05>

KPMG Hungary (2018) Női vezetők növekedési kilátásokról, vezetői attitűdről és a digitalizációról <https://blog.kpmg.hu/2018/09/noi-vezetok-novekedesi-kilatasokrol-vezetoi-attitudrol-es-a-digitalizaciorol/>

Kotroczó Melitta (2021): Több nőre van szükség az IT-szektorban. Csupán 9 százalék a technológiai szektorban dolgozó női felsővezetők aránya. In: *vg.hu (Világ-gazdaság)*. Accessed 24 June 2022 <https://www.vg.hu/vilaggazdasag-magyar-gazdasag/2021/10/tobb-nore-van-szukseg-az-it-szektorban>

Központi Statisztikai Hivatal (2021). Digitális gazdaság, 2020. Budapest. Accessed 24 June 2022 <https://www.ksh.hu/docs/hun/xftp/idoszaki/ikt/2020/02/index.html>

Liptay Gabriella (2021): Globális KPMG kutatás női felsővezetők körében: a COVID-időszak még égetőbbé teszi a női munkavállalók esélyegyenlőségén. KPMG Hungária, Budapest. Accessed 24 June 2022 <https://home.kpmg/hu/hu/home/media/press-releases/2021/03/kpmg-kutatas-noi-felsovezetok-koreben-a-covid-idoszak-meg-egetobbe-teszi-az-eselyegyenloseg-ugyet.html>

Magyarország Kormánya (2020). Az Európai Unió számára készített „A nők szerepének erősítése a családban és a társadalomban” akcióterv (2021–2030) Accessed 24 June 2022 <https://cdn.kormany.hu/uploads/document/a/a4/a4d/a4dcd97363ec031dc896ff8d092c9dcc63e7c420.pdf>

Magyarország Kormánya (2022a). Digitális Jólét Program. Budapest. Accessed 24 June 2022 <https://digitalisjoletprogram.hu/hu/rolunk>

Magyarország Kormánya (2022b). Megalakul a Digitális Magyarország Ügynökség. A Kormányzati Tájékoztatási Központ közleménye. Budapest. Accessed 24 June 2022 <https://kormany.hu/hirek/a-kormanyzati-tajekoztatasi-kozpont-kozlemenye-2022-05-30>

Marciniak R., Móricz P., & Baksa M. (2020). Digitális transzformáció a magyar üzleti szolgáltató központokban. Multidiszciplináris kihívások, sokszínű válaszok - Gazdálkodás- és Szervezéstudományi folyóirat (2), 116-139. Accessed 24 June 2022 <https://doi.org/10.33565/MKSV.2020.02.07>

Matyusz, Z., & Pistrui, B. (2020). Digitalizációs projektek a magyar kiskereskedelmi szektorban: Két meghatározó szegmens összehasonlítása empirikus példákon keresztül. *Vezetéstudomány / Budapest Management Review*, Vol. 51 Issue 6, p. 27–41. Accessed 24 June 2022 <https://doi.org/10.14267/VEZTUD.2020.06.04>

Móricz Péter (2022). A magyarországi vállalatok digitális képessége a pandémia előtt = Digital capabilities of Hungarian companies before the pandemic. *Vezetéstudomány / Budapest Management Review*, Vol. 53 Issue 3. P. 2–18. Accessed 24 June 2022 <https://doi.org/10.14267/VEZTUD.2022.03.01>

Nagy Beáta (2020). “Mummy is in a Call”: Digital Technology and Executive Women’s Work-Life Balance. In: *Social Inclusion* Vol 8. Issue 4. p. 72-80. Accessed 24 June 2022 <https://doi.org/10.17645/si.v8i4.2971>

Obermayer, N., Csizmadia, T., Hargitai, D. M., & Kigyós, T. A. (2021). Az Ipar 4.0 implementációval kapcsolatos vezetői motivációk és akadályozó tényezők elemzése hazai vállalatvezetők véleménye alapján. *Vezetéstudomány / Budapest Management Review*, Vol. 52 Issue 2, p. 60–72. Accessed 24 June 2022 <https://doi.org/10.14267/VEZTUD.2021.02.06>

Pécsi Tudományegyetem (2017). Digitális kompetenciák és pályaorientáció munkaerőpiaci összefüggései a 21. Században. Kutatási zárótanulmány. Pécs. Accessed 24 June 2022 <http://mek.oszk.hu/16800/16809/16809.pdf>

Poór József, Schottner Krisztina, Frajna Piller Annamária et al. (2019) Változások az emberi erőforrás menedzsmentben a digitális transzformáció útján egy magyarországi empirikus kutatás tükrében. Munkaügyi Szemle, Vol. 62 Issue 2. p. 8-14 Accessed 24 June 2022 <http://real.mtak.hu/id/eprint/93367>

Portfolio (2022). 2022 a vállalati digitális transzformáció éve lesz. Budapest. Accessed 24 June 2022 <https://www.portfolio.hu/uzlet/20220125/2022-a-vallati-digitalis-transzformacio-eve-lesz-522889#>

SAS Institute (2022): Digitális Transzformáció.Mi is az és miért fontos?. Cary. Accessed 24 June 2022 https://www.sas.com/hu_hu/insights/data-management/digital-transformation.html

Takács Izolda (2020). Akadályok a nők karrierjének útjában – a szervezetek útvesztői. Metszetek, Vol. 9. Issue. 1. p. 65-83. Accessed 24 June https://metszetek.unideb.hu/files/metszetek_202001_04.pdf

Tatár-Kiss Klára (2021). A nemzeti kultúra és a szervezeti kultúra egymáshoz való viszonyulása a nemek közti egyenlőség aspektusában: A női vezetők egyenlőségét vizsgáló 9 országra kiterjedő összehasonlító tanulmány =The relationship between national culture and organisational culture from the perspective of gender equality: A comparative study of 9 countries on the equality of women in leadership positions In: Crossref; Prosperitas, 2020/3. p. 21-47. Accessed 24 June 2022 https://doi.org/10.31570/Prosp_2020_03_2

Tóth-Kaszás, Nikoletta; Németh, Kornél; Michalec, Gabriella (2021). A humánerőforrás-fejlesztés kihívásai a digitális átállás fényében - kihívások, reakciók, törekvések és várakozások = Challenges of human resource development during the digital transition - challenges, reactions, aspirations and expectations. In: Vezetéstudomány / Budapest Management Review. Vol. 52 Issue 4, p. 80-92. Accessed 24 June 2022 <https://doi.org/10.14267/VEZ-TUD.2021.04.07>

Trend FM (2022). Egyre erősebb digitális kényszer szorítja a kkv-kat. Budapest. Accessed 24 June 2022 <https://trendfm.hu/cimlap/digitalizacios-ugrassal-nohetik-ki-magukat-a-kkv-k-17583>



DISCLAIMER:

The European Commission support for the production of this publication does not constitute an endorsement of the contents which reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



ANDRÁSSY
UNIVERSITÄT
BUDAPEST



Bundesagentur für Arbeit
Regionaldirektion Hessen



**Co-funded by
the European Union**

ERASMUS+ DIGIGEN Project Ref. No. 2021-1-DE02-KA220-VET-000025335

DIGIGEN © 2022 by DIGIGEN Consortium is licensed under CC BY-NC-SA 4.0.
To view a copy of this license, visit <https://creativecommons.org/licenses/by-nc-sa/4.0/>