Chapter 8
Collaborative
Inventory—A Participatory Approach to Cultural Heritage Collections

Špela Ledinek Lozej

Abstract The chapter presents creation of a collaborative inventory and a cross-border network of collections in the framework of the cross-border project that linked different stakeholders (collectors, local communities and experts from the field of museology, ethnology and digital humanities) with the aim of valuation—i.e. identification, register, arrangement, presentation and promotion—of cultural heritage collections. It discusses impacts, issues and pitfalls of the participatory approach by pointing out (1) the nature of participatory approach, (2) participation in relation to the materiality of collections and virtuality of a database and (3) advantages of a participatory approach for involved actors.

Keywords Participation · Heritage · Inventory · Borderland · Cross-border cooperation · Heritage database · Participatory archive

8.1 Introduction

Over the course of the past decades, the concept of participation has profoundly modified—it is not just the discourse and practice of international and national policy-making and implementation in areas of urban planning and community development (Arnstein 1969; Cornwall 2008), but has entered also heritage discourses and practices of heritage-making. Participation within the heritage arena is not considered just as a governance instrument, but also and more as a general involvement of stakeholders within a range of heritage processes and projects (Neal 2015). Moreover, by including a variety of stakeholders—especially those groups in need to have their voices added to official records (Iacovino 2012)—is possible to provide alternative narratives and more inclusive heritage-making. Amongst such marginalised groups are communities in remote rural border areas. Despite or because of remoteness these areas might be reached in cultural assets, which have been acknowledged as (cultural) heritage and (endogenous) development potential (Šmid and Ledinek 2013;
Digital domain and tools are convenient for the community groups to participate at heritage-making and at the same time allow institutions to move beyond the production of authoritative and hegemonic (heritage) narratives and to deploy sensibility of reflexivity, critique, revision, affect, polysemy, relationality and imagination (Cameron 2011). Involvement of remote communities and individuals of the cross-border area in the heritage-making via digital tools seems a plausible solution. Actually, in the case of ZBORZBIRK project—Cultural Heritage between the Alps and the Karst (CBC Slovenia–Italy 2007–2013, http://zborzbirk.zrc-sazu.si), participatory approach evolved already in the phase of project generation and only continued in the phase of implementation. Besides collaborative inventory, the project aims were also arrangement and equipment, presentation and promotion of local heritage collections in the northern Italian—Slovenian cross-border region. Based on the experiences at ZBORZBIRK project, the chapter discusses impacts, issues and pitfalls of the participatory approach at the collaborative inventory and mentions some improvements and references needed for the eventual transferability and/or scaling up of the network of cultural heritage collections by pointing out:

- the nature of participatory approach at the project,
- participation in relation to the materiality of collections and virtuality of the database, and
- advantages of a participatory approach for all involved actors.

By doing that it tries to contribute to the broader discussion of possibilities and weaknesses of participation within heritage-making processes.

8.2 Citizens Collecting Practices and Co-creative, Collaborative and Contributory Inventory

The ZBORZBIRK project was initiated on the basis of the long-term regional ethnographic research of several experts (ethnologists, anthropologists, folklorists and linguists) that were joined in the co-design process by representatives of the partners’ institutions—one cultural-educational institution, two museums and six local communities (Fig. 8.1) (Ledinek Lozej 2014; Ledinek Lozej and Ravnik 2016; Ravnik 2012).

The preliminary list of collections was based on the evidences of private collections of different research and/or heritage institutions and associations, yet the final list was elaborated in collaboration with partners and owners of the collections. Some of the invited collectors refused to participate in the project due to various reasons (e.g. disagreement with the partner’s institution or other collectors, fear of inventarisation, general lack of interest), the others joined (or wanted to join) in the course of initial activities, predominately because of the possibility of investments in the equipment and promotion through different media (websites with the browser, guide book, publications and other promotional activities). At the final stage, the project involved thirty-four cultural heritage collections; fifteen from the Slovenian
side of the border and nineteen from the Italian side. Most of them (twenty-one) are private-owned, eight are in property of associations, four of local communities and one is a museum branch. Only four collections are regularly on view to the public, six of them are inaccessible, while the rest can be viewed by prior arrangement with the owner or the guardian of the collection. They also differ according to typology and content (Ravnik 2012; Ledinek Lozej 2017).

In rethinking project’s participatory approach, we follow the models for public participation in scientific research, identified by Center for Advancement of Informal Science (Bonney 2009) and further elaborated for the field of museology by
Simon (2010). They defined three broad categories of public participation—contribution, collaboration and co-creation. In contributory projects, participants provide limited and specific objects, actions or ideas to an institutionally controlled process. In collaborative projects, citizens are invited to serve as active partners in the creation of institutional projects that are originated and ultimately controlled by the institutions. In co-creative projects, community members work together with institutional staff members from the beginning to define the project’s goals. Differences amongst participatory projects are highly correlated with the amount of ownership, control of process and creative output given to (core) institutional project partners and participants (Simon 2010). Backward-looking, we esteem that ZBORZBIRK project incorporated some elements from each model, as there were several levels of participation:

1. co-creation of project goals, activities and outputs amongst project partners: needs, goals, working styles and benefits of all involved partners were supported as the majority of partners (but not all of them) were engaged and dedicated to the project;
2. collaboration at setting up the network of thirty-four collections amongst (some) project partners and owners/managers of collections (which were in majority cases identical): only target collections were included in the network; the networking process was controlled by core partnership following the initial plan and concept; the majority of the collectors came with the explicit intention to participate; the rules of engagement were based on the goals and capacity of the core partnership consortia that curated, designed and delivered completed outputs;
3. content contribution of collectors to the digital inventory: construction of a central database, using the client–server model with computer database and application on the server of the lead partner instead of use of a local database (that would keep the primary metadata collections at the places of owners/collectors, increase their sense of ownership and, at the same time, make maintenance and administration more difficult); the metadata on the collections’ objects were inserted into modelled computer database by registrars and administrators, trained at the workshops and controlled by editors, language and photograph editors, responsible for content, linguistic and photographs supervision; the whole inventory procedure, as well as communication between registrars, editors, a database scheme designer and a programmer, was coordinated and monitored by editor-in-chief, assigned by lead partner (Ledinek Lozej et al. 2015).

The ZBORZBIRK catalogue only partially complies with the “archive 2.0” or “participatory archive”, as it was set by Huvila (2008) and has the following characteristics: decentralised curation (i.e. sharing of curatorial responsibilities between archivists and participants), radical user orientation (i.e. priority of usability over preservation) and contextualisation of both records and the entire archival process. Even though a participatory archive is often about crowdsourcing, it might, as in our case, focus on deeper involvement and more complex semantics (Huvila 2008). However, our project was consistent with the understanding of the archives as “an organization, site or collection in which people other than the archives professionals con-
tribute knowledge or resources resulting in increased understanding about archival
materials, usually in an online environment” (Theimer 2014, para 37). Besides iden-
tifying the participatory approach at collaborative/contributory inventory, we have
to take into consideration also participatory aspects of the cross-border network of
collections, a network, that might be—referring to Bauman (2000) and following
Cameron (2015)—described as “a liquid museum”, a heterogeneous assemblage of
(mobile, coherent, (de)territorialized and dispersed) material and expressive forms
emmeshed in diverse collectives. The relation between unified digital repository and
dispersed material collection will be questioned in the next chapter.

8.3 Materiality of Collections Versus Virtuality
of the Inventory Database

The central activity of the project was the creation of a digital inventory of thirty-four
cultural heritage collections that differed regarding the ownership, accessibility to
public, typology and content. Collections particularities, differences in the interests
of collectors and in competences of registrars influenced physical, informational and
procedural scopes of the registration process. For the purpose of the inventory, a
metadata scheme and an application for entering the data of the inventoried objects
were established, based on past experiences in museology, collections management
standards and recommendations, former and existing museum applications, open-
source platforms and frameworks and particularly on the information projects in the
field of ethnology that had dealt with similar circumstances and encountered similar
problems. One of the main challenges of the project was to define a metadata scheme
and a registration procedure that would be sufficiently flexible not to discourage the
owners and the registrars from a thorough and comprehensive registration of objects.
A unified repository, that aggregate metadata of material objects (items) from the
collections as well as digital photographs and scans of images and textual objects was
established. In total, there are 5355 items and 9334 digital objects (digital photographs
or scans) in the repository at the moment. Not all collectors that joined the network,
were favourable to digitalisation, and especially to online publishing of the inventory.
On the contrary, the majority understood digitalisation as a valuation tool or process,
and however, some of them were also very keen on online publishing as a media of
their promotion (Ledinek Lozej and Peče 2014; Ledinek Lozej et al. 2015; Ledinek
Lozej 2017). Therefore, some of the collectors estimated that their “real” objects were
under threat by the reproducibility of the “immaterial” nature of digital objects, and
on the other hand, the others saw that “immaterial” reproductability as an opportunity
of enhancing the value of their “real” artefacts. This issue triggered the revealing of
the relationship between “real” collections and their digital inventories and between
the physical act of collecting and the digital sphere of creating an entry into the
database.
Collection is objects’ sets, lifted out of the common purpose of daily life and invested—utmost by collectors, but also by visitors—with thoughts, feelings, time, troubles and resources (Pearce 1995). Due to that, they are invested with social meaning and have the character of something extraordinary, special and capable of generating reverence (Belk 1988). The imaginative link that unites the collected objects/artefacts may be purely personal or may engage the wider world (Pearce 1995). In the ZBORZBIRK case, it ranged from very personal collections of irons and holy cards, found remnants of the WWI, inherited carpentry and blacksmith workshop, to collections of a great variety of rakes, manufactured by the local artisans, to the larger and more systematic collections of the local crafts, clothing or carnival characters. Regardless of all mentioned content differences, all collections have in common that the materiality of its artefacts was really appreciated by the collectors and guardians. Because of the fact, that collections were a result of invested time, efforts and resources, some owners were afraid of losing control and of the devaluation of their investments and collection’s integrity by digitalising. Following Cameron (2007) this apocalyptic view of the real–virtual relationship is based on a fear that “real” collections might become obsolete as virtual simulations became more convincing. On the other hand, knowing that reproductions had a significant role in the formation of cultural capital (Bourdieu and Darbel 1991), we know that digital objects bring the “real” object into the presence of the viewer. Collectors’ and registrars’ decisions on what to include into the inventory were an active process of value and meaning-making, equal to the ascription of social meanings to their physical counterparts. It enacted the curatorial process of selection of what was significant, what should be remembered and forgotten and what categories of meaning such as classification, cultural values or aesthetic attributes were given pre-eminence. The value of “real” objects and collections increased when they were digitized, by enhancing their social, historical and aesthetic importance, owing to the resources required in the compilation of digital rendering, distribution and dissemination. Within this context, the “real” object was not under threat but acted as an alibi for the virtual (Cameron 2007).

Despite that ability, catalogued objects remain rooted in the specific sense of a place and connected to personal/family/local versions of the past (King 2016). Therefore, we assume that tangibility is still fundamental to the way that collectors relate to the environment and act in the world. We suppose that gathered objects and sets of artefacts do not simply reflect the (past and present) lives of collectors in a passive manner, but are a fundamental medium for their action in the world (e.g. communication of cultural difference), as much constituting as constituted (Tilley 2007). Hereby, we can—following Cameron (2007)—assume that the project was still bounded by an object-centred museum culture and material culture paradigms, integrated in the broader heritage complex of an institutionalized culture of discourses, practices and ideas, that make digital objects just a “replicant” with constraint value, meaning and imaginative uses.
8.4 Borderlands and Their Empowerment

The northern Slovenian-Italian border region—i.e. the north-eastern mountain part of the ex-province of Udine in Italy and the northern part of the Goriška region and western part of the Gorenjska region in Slovenia—is a remote area, which is, especially on the Italian side, in comparison with the regional urban and tourist centres, underdeveloped in terms of economy. Due to the remoteness of the area and a consecutive delay in socio-economic structural changes on both sides of the border, some elements of past material culture remained well preserved in situ. The other reason that encouraged collecting practices was an abundance of fund remnants from the nearby WW1 Soča/Isonzo River Front. And the third reason that supported the collecting practices was the fact that the territory on the Italian side of the border was annexed to the Italy in 1866, and hence, the Slovenian-speaking inhabitants were separated and forced to assimilation, and due to the suppressing Italian policies (they were officially recognized as a linguistic minority only in 2001), they find their way of expression of cultural difference via collecting (Ravnik 2017). That resulted in vigorous collecting practices and numerous cultural heritage collections. After the fall of the Iron Curtain, especially after the entry of Slovenia into the EU (2004) and the Schengen area (2007), and disbanding of borders different attempts to reconnect the territory emerged. And our project also joined these attempts with the aim to link borderland cultural heritage collections. For that purpose, we organized besides collaborative inventory also several other events (a workshop, trainings, presentations of collections, openings of info-points) and implemented several investments that supported the participation of stakeholders and enabled a creation and reinforcement of a cross-border network of experts (museologists, ethnologists, cultural anthropologists, linguists, folklorists, historians, photographers, information specialists), project managers and official representatives of local municipalities, owners and guardians of collections and individuals, engaged in developing their own knowledge about preservation and management of museum objects and about information technologies and standards. The network enabled the exchange of information and became a “vessel of significance”—a vessel as the building block for theorizing meaning in heritage (Labrador and Chilton 2009, p. 7). Within this framework, the values of heritage remain individualized, but the need and quest for valuing are understood as shared (Labrador and Chilton 2009). Collectors, registrars, representatives of local communities, museum and several experts, all found common ground not in (specific personal or collective) objects and with them related narratives but in the shared process of creating and marking them. More important than the project concrete results and outputs was the process of co-creation of a project, repository and a network and the actual and potential benefits arising from the experiences of engagement.

Bennett in his book The Birth of the Museum (1995) showed how the early modern state of the nineteenth century saw the museum as a part of an ensemble of governmental agencies such as schools, a police and prisons. Similarly, Ricouer wrote that archives are collections of documented testimonies, “silent orphans”, separated from
their authors and settled in the space of authoritative observations of the past and production of historical knowledge (Ricoeur 2004, p. 166). Museums and heritage institutions have institutionalized authority to act as custodians of the past (Cameron and Kenderdine 2007). That institutional authoritativeness might be counterbalanced by employing participatory approach and/or digital domain. Therefore, the value of the participatory approach in collaborative inventory is not related just to participatory archive (Huvila 2008; Theimer 2014) and liquid museum (Cameron 2015), but also to broader questions about public history, history from below (Samuel 1994; Kean and Ashton 2009; King 2016) and citizen science (Eitzel 2017). The possibility to include contents that are not valuable from the perspective of the archivist, curator or researcher, but also from the view of wider publics, offers the potential to restructure (institutional) authority and to empower participants (King 2016); hence, the possibility for a more democratic and pluralistic engagement with heritage.

The fact that experts no longer deliver content and meaning exclusively, but serve as facilitators, intermediaries, curators, editors and registrars, changed also the role of institutions as contents authorities. It is threatening to the power of the heritage and research institutions (Simon 2010) and has political implications. It works towards recognition and empowerment of collectors and their practices in local communities, as well as towards recognition of the remote cross-border rural areas.

8.5 Concluding Discussion on Shortcomings and Impacts of Participatory Approach

Participation is a buzzword and, as pointed out by Hertz (2015, p. 25), “at the centre of a semantic field filled with familiar if vague notions of ‘engagement’, ‘ownership’, ‘empowerment’”. The overuse and blur in the field of administration, political processes and research, called for as transparent assessment of the advantages and shortcomings (and their overcoming) of participation at our undertaking.

The advantages of participatory approach, as presented and discussed above are:

1. co-creation of a participatory archive of digital objects, characterised by decentralised curation, user orientation and contextualised archival process (beside records);
2. setting up a cross-border network of collections, experts, representatives of local communities and other actors in the field of heritage with benefits for all involved actors;
3. empowerment of non-authorised/institutional heritage actors in borderlands.

They extend over two strands (Eitzel 2017) of citizen science: in the contribution of non-experts to the expert enterprise (a method or form of collaboration) and at the same time, they addressed the responsibility of science to society (i.e. democratization of heritage-making). Hence, they comply fully to the principles of citizen science, developed by the European Citizen Science Association (ECSA 2015).
Our presumption that a digital repository and creation, interpretation and presentation of data using digital technologies would automatically support participation of collectors at entering information into the database was only partially correct. The reasons lie in:

- collectors’ limited skills and willingness,
- in their attachment and closeness to the material aspects of objects and general mistrust to virtuality;
- in the fact that the software was a compromise between expectations and needs of all involved stakeholders (including the administrative expectation of co-financing programme), and hence, it did not meet all the needs of all involved users appropriately. For the time being of the project, that issue was resolved by administrators, registrars and professionals that gathered narratives on the objects and collections and facilitated the participatory process, but it was not a sustainable solution.

The greatest deficiency of the project is its sustainability. After the end of the project’s founding, there were no resources for the continuation of activities. Being aware of that already in the phase of creating a metadata scheme our aim was to maximize interoperability (e.g. a basic Dublin Core metadata structure), which could facilitate a possible unification of metadata with other already existing or potential inventories. Having in mind that some of the collections might come to belong to public museum institutions in the future, it might be reasonable to design the archival application according to the tools that are generally used in museums. This was impossible since there were different archival applications used on either side of the border. Hence, a new application was developed that tried to respond to the different needs of the partners and owners and guardians of collections. Adjustments were mostly necessary for the field of linguistics due to the bilingual demands of the project administration and multilingual character of the area.

The most essential question regarding a participatory archive is whether it works or not: whether the users contribute to an archive and whether the contributions create added value. According to Huvila (2008), the functional sustainability of a repository is highly dependent on the activity of archive users and the emergence of a culture of collaboration, integration into daily practices and a critical mass to sustain the necessary level of contributions, which obliges others to contribute (Huivila 2008). Despite the fact that the ZBORZBIRK database is not updated constantly since the closure of the project its content seems to be still significant to some of the users as they are reconfiguring it into new networks (e.g. the integration of the project result into the tourist offer).

The ZBORZBIRK collaborators are generally satisfied with the experiences gained and lessons learned. The time seems mature for eventual follow-ups, reconfigurations, transfers, and/or scaling ups. There are still valuable lessons to be learned from engaging with practical and theoretical considerations of what the participatory approach may offer and how it can enhance the value of heritage experiences. In a world where rigid, fixed and obsolete institutional structures and forms of analysis are increasingly problematic, new ontologies and knowledge practices are required.
that more clearly match the heritage experience of contemporary circumstances (Cameron 2015).

References

Arnstein SR (1969) A ladder of citizen participation. J Am Plan Assoc 35(4):216–224
Bauman Z (2000) Liquid modernity. Polity, Cambridge
Belk RW et al (1988) Collectors and collecting. Adv Consum Res 15:548–553. http://acrwebsite.org/volumes/6863/volumes/v15/NA-15. Accessed 5 July 2018
Bennet T (1995) The birth of the museum. History, science, politics. Routledge, London
Bonney R et al (2009) Public participation in scientific research. Defining the field and assessing its potential for informal science education. A CAISE inquiry group report. Center for Advancement of Informal Science Education, Washington. http://www.birds.cornell.edu/citsctoolkit/publications/CAISE-PPSR-report-2009.pdf. Accessed 5 July 2018
Bourdieu P, Darbel A (1991) The love of art. European art museums and their public, Polity, Oxford
Cameron F (2007) Beyond the cult of the replicant. Museums and historical digital objects—traditional concerns, new discourses. In: Cameron F, Kenderdine S (eds) Theorizing digital cultural heritage. A critical discourse. Massachusetts Institute of Technology, Cambridge, pp 49–76
Cameron F (2011) From mitigation to creativity. The agency of museums and science centres and the means to govern climate change. Museum Soc 9(2):90–106
Cameron F (2015) The liquid museum. New institutional ontologies for a complex, uncertain world. In: Witcomb A, Message K (eds) The international handbooks of museum studies. Museum Theory. Willey, Blackwell, pp 345–361
Cornwall A (2008) Unpacking “participation”. Models, meanings and practices. Community Dev J 43(3):269–283. https://doi.org/10.1093/cdj/bsn010
ECSA (2015) 10 principles of citizen science. https://ecsa.citizen-science.net/engage-us/10-principles-citizen-science. Accessed 7 July 2018
Eitzel MV et al (2017) Citizen science terminology matters. Exploring key terms. Citizen Science. Theory Pract 2(1):1–20. https://doi.org/10.5334/cstp.96
Hertz E (2015) Bottoms, genuine and spurious. In: Adell N et al (eds) Between imagined communities of practice. Participation, territory and the making of heritage. Universitätsverlag, Göttingen, pp 25–58. https://doi.org/10.4000/books.gup.191
Huvila I (2008) Participatory archive. Towards decentralized curation, radical user orientation, and broader contextualization of records management. Arch Sci 8(1):15–36. https://doi.org/10.1007/s10502-008-9071-0
Iacovino L (2012) Reshaping identity and memory. Balancing competing human rights in the participatory archive. http://ica2012.ica.org/files/pdf/Full%20papers%20upload/ica12Final00092.pdf. Accessed 5 July 2018
Kean H, Ashton P (2009) Introduction. People and their pasts and public history today. In: Kean H, Ashton P (eds) People and their pasts. Public history today. Palgrave, Basingstoke, pp 1–20
King L et al (2016) Experiencing the digital world. The cultural value of digital engagement with heritage. Herit & Soc 9(1):76–101. https://doi.org/10.1080/2159032x.2016.1246156
Labrador AM, Chilton ES (2009) Re-locating meaning in heritage archives. A call for participatory heritage databases. In: Computer applications to archaeology 2009 proceedings. https://works.bepress.com/angela_labrador/5/. Accessed 5 July 2018
Ledinek Lozej Š (2014) Dokumentacija kulturne dediščine v projektu ZBORZBIRK: Kulturna dediščina v zbirkah med Alpami in Krasom. Glasnik Slovenskega etnološkega društva 54(1–2):66–69

Ledinek Lozej Š (2017) Local cultural heritage collections from the Slovenian-Italian Border Region. In: Pinton S, Zagato L (eds) Cultural heritage. Scenarios 2015–2017. Edizioni Ca’ Foscari, Venezia, pp 607–621. https://doi.org/10.14277/6969-052-5/se-4-38

Ledinek Lozej Š, Peče M (2014) Povezovanje krajevnih zbirk-kulturne dediščine z informacijsko-komunikacijskimi tehnologijami: Primer “ZBORZBIRK”. Knjižnica 58(3):41–57

Ledinek Lozej Š, Ravnik M (2016) Sodelovanje raziskovalcev in lokalnih skupnosti na čezmejnem območju med Alpami in Krasom. Primer projekta ZBORZBIRK. In: Gričić Jakopovič J et al (eds) Srednjeevropsko povezovanje etnologov in kulturnih antropologov kot izziv današnjemu času. 13. vzporednice med slovensko in hrvaško etnologijo. Slovensko etnološko društvo, Ljubljana, pp 53–65

Ledinek Lozej Š et al (2015) Linking local cultural heritage collections from the Slovenian-Italian borderregion with ICT. Pregled Nacionalnog centra za digitalizaciju 27:52–64

Neal C (2015) Heritage and participation. In: Waterton E, Watson S (eds) The Palgrave handbook of contemporary heritage research. Palgrave Macmillan, London. https://doi.org/10.1057/9781137293565_22

Pearce S (1995) On collecting. An investigation into collecting in the European tradition, Routledge, London and New York

Ravnik M (2012) Kulturna dediščina v zbirkah med Alpami in Krasom. Evropski projekt ZBORZBIRK. Trinkov koledar, pp 101–103

Ravnik M (2017) Pomen tradicionalne kulture za samorealizacijo indružbeno komunikacijo med slovensko manjišno v Videmski pokrajini. Glasnik Slovenskega etnološkega društva 57(3–4):128–133

Ricoeur P (2004) Memory, history, forgetting. University of Chicago, Chicago

Samuel R (1994) Theatres of memory. Past and present in contemporary culture, Verso, London

Simon N (2010) The participatory museum. Museum 2.0, Santa Cruz

Šmid Hribar M, Ledinek Lozej Š (2013) The role of identifying and managing cultural values in rural development. Acta Geographica Slovenica 53(2):371–378. https://doi.org/10.3986/AGS53402

Šmid Hribar M, Bole D, Pipan P (2015) Sustainable heritage management. Social, economic and other potentials of culture in local development. Procedia. Social & Behavioral Sciences 188:103–110. https://doi.org/10.1016/j.sbspro.2015.03.344

Theimer C (2014) The future of archives is participatory. Archives as platform, or a new mission for archives. http://archivesnext.com/?p=3700. Accessed 7 July 2018

Tilley C (2007) Book review of Archaeologies of Materiality. In: Meskell L (ed). Am J Archaeol 111(2). https://doi.org/10.3764/ajaonline1112.tilley

Open Access This chapter is licensed under the terms of the Creative Commons Attribution 4.0 International License (http://creativecommons.org/licenses/by/4.0/), which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter’s Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the chapter’s Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.