Strategies for Circular Building Adaptability in Adaptive Reuse		Phase to implement	Related Layer(s) S1. Site S2. Structure S3. Skin S4. Services S5. Space S6. Stuff	Examples	Related Rs from the R-ladder R0 Refuse R1 Rethink R2 Reduce R3 Re-use R4 Repair R5 Refurbish R6 Remanufacture R7. Repurpose R8 Recycle R9 Recover	Determinants of Circular Building Adaptability										YES/ NO	S3. Skin	S4. Services	S5. Space	S6. Stuff
						Adaptability Determinants			Interrelated Determinants				Circularity Determinants								
						Functional Convertibility	Volume Scalability	Asset Refit-Ability	Configuration Flexibility	Product Demountability	Asset Multi-Usability	Design Regularity	Material Reversibility	Building Maintainability	Resource Recovery					
Passive Strategies	1. Design Standardization	Design	S4, S5. S6	Consisted use of walls, doors and windows	R2				X	X		X								
	2. Separation of the Building Layers (e.g. Separated Walls)	Design	S3, S4, S5, S6	Partitions are independents connected by dry connections	R2		X		X	X										
	3. Open the Floor Plan	Design	S5	Open office space	R2		X		X											
	4. Provision of Multi-Purpose Spaces	Design	S5	Spaces that can be used as offices and meeting rooms	R1						X									
	5. Modularization of Spatial Configuration (Layout)	Design	S4, S5	Unitized and repetitive pattern of rooms	R2	X						X								
	6. Utilization of Standardized Building Products	Design	S4, S5. S6	Using standardized doors, ceilings and partitions throughout the building	R2							X	X							
	7. Provision of a Core for Building Services	Design	S5	Central area providing an elevator and a shaft	R2	X														
	8. Design for Surplus Capacity	Design	S3, S4, S5	Oversizing spaces and systems	R1 and R0	X	X	X												
	9. Compartmentalization of Design	Design	S4, S5	The building is divided into independent zones	R1	X		X												
	10. Design for a Mixed Use (Multifunctionality)	Design	S3, S4, S5, S6	The building includes and can accommodate different function	R1	X														
	11. Utilization of Secondary (Reused/Recycled) Materials/Products	Design	S4, S5. S6	Using second hand furniture	R3 and R8								X		X					
	12. Utilization of Biobased (Biological) Materials	Design	S3, S4, S5. S6	Using timber-based products	R2								X		X					
	13. Utilization of Circular (Reusable/Recyclable) Materials/Products	Design	S3, S4, S5. S6	Glass panels can be reused and recycled at the end of their use	R2								X							
	14. Alignment of the Interconnection Between the Floor Plans	Design	S5	Horizontal zones are vertically coordinated with other zones through circulation means	-		X													
	15. Alignment of the Building Design with the Real Estate Strategy	Design	S5	The building horizontal zones are coordinated with other zones	-				X											

Legend	R0- R2 = Smarter product use and manufacture	R3- R7 = Extend life of product and its parts	R8- R9 = Useful application of materials

A worksheet for exploring, determining, assessing, and reporting the promotion of CBA in adaptive reuse design

Note: Yellow fields must be filled out by the user, if applicable.

	Strategies for Circular Building Adaptability in Adaptive Reuse	Phase to implement	Related Layer(s) S1. Site S2. Structure S3. Skin S4. Services S5. Space S6. Stuff	Examples	Related Rs from the R-ladder R0 Refuse R1 Rethink R2 Reduce R3 Re-use R4 Repair R5 Refurbish R6 Remanufacture R7. Repurpose R8 Recycle R9 Recover	Determinants of Circular Building Adaptability										YES/ NO	S3. Skin	S4. Services	S5. Space	S6. Stuff
						Adaptability Determinants			Interrelated Determinants				Circularity Determinants							
						Functional Convertibility	Volume Scalability	Asset Refit-Ability	Configuration Flexibility	Product Demountability	Asset Multi-Usability	Design Regularity	Material Reversibility	Building Maintainability	Resource Recovery					
Active Strategies	16. Utilization of Adjustable Building Products/ Components to Users	Design and use	S4, S5. S6	Folding walls and adjustable office desks	R0 and R1		X		X											
	17. Utilization of Dismountable Building Components	Design and Use	S4, S5. S6	Demountable walls and cubicles	R1		X	X	X	X			X							
	18. Provision of Shareable Spaces	Design and Use	S5	Shareable meeting rooms, shareable kitchens and shareable lounge	R1						X									
	19. Utilization of Renewable Energy Technologies	Design and Use	S3, S4	PV panels and PVT panels	R2										X					
	20. Enabling the Use of Natural Lighting/Ventilation	Design and Use	S3, S4	Windows are accessible and can ease the use of natural lighting and ventilation	R2										X					
	21. Utilization of Flexible and Integrated Installations (e.g. Integrated MEPs, Plug-and-Play)	Design and Use	S4, S5	Integrated wall partitions that bring together different systems (e.g. acoustical insulations and electric connections)	R1			X	X			X								
	22. Utilization of Water Recovery System	Design and Use	S4	Using system that collects and treats the used water to be used for other purposes	R2 and R3										X					

Legend	R0- R2 = Smarter product use and manufacture	R3- R7 = Extend life of product and its parts	R8- R9 = Useful application of materials

A worksheet for exploring, determining, assessing, and reporting the promotion of CBA in adaptive reuse design (continue)

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Strategies for Circular Building Adaptability in Adaptive Reuse		Phase to implement	Related Layer(s) S1. Site S2. Structure S3. Skin S4. Services S5. Space S6. Stuff	Examples	Related Rs from the R-ladder R0 Refuse R1 Rethink R2 Reduce R3 Re-use R4 Repair R5 Refurbish R6 Remanufacture R7. Repurpose R8 Recycle R9 Recover	Determinants of Circular Building Adaptability														
						Adaptability Determinants			Interrelated Determinants				Circularity Determinants								
						Functional Convertibility	Volume Scalability	Asset Refit-Ability	Configuration Flexibility	Product Demountability	Asset Multi-Usability	Design Regularity	Material Reversibility	Building Maintainability	Resource Recovery	YES/ NO	S3. Skin	S4. Services	S5. Space	S6. Stuff
Operational Strategies	23. Provision of Shareable Facilities	Design and Use	S4, S6	Shareable office machines	R1						X									
	24. Application of (or update of) Material Passports	Design, Use Construction	S3, S4, S5, S6	Recording the performance and properties of all used products	R0					X			X	X						
	25. Procurement of the Service of Building Products	Design and Use	S3, S4, S5, S6	Leasing elevators, lightings, façade, or fit outs as a service	R1			X			X		X	X						
	26. Selective Dismantling	Design, Use Construction	S3, S4, S5, S6	Removing old walls, part by part, to avoid inflicting damage	R3 and R6								X							
	27. Send Back Discarded Material for Reuse/Recycling	Design, Use Construction	S3, S4, S5, S6	Send back decorticated ceiling tiles for recycling or reuse	R3, R7 and R8								X							
	28. Repurpose Old Building Materials/Products	Design and Construction	S4, S5. S6	Repurposing old timber in other forms of finishes	R7								X							
	29. Product Exchange	Design	S4, S5. S6	Exchanging old products with providers of second hand products	R2 and R3						X		X							
	30. Implementation of Proactive/ Predictive Maintenance	Use	S3, S4, S5	Implementation of a proactive maintenance of the MEP systems	R4									X						
	31. Repair of Old Building Components/Systems	Design and Construction	S3, S4, S5	Repairing old storing cabinets	R4 and R5									X						
	32. Preservation of Monumental/Old Parts	Design and Construction	S3, S4, S5,S6	Preservation of monumental finishes, doors and windows	R4 and R5								X	X						
	33. Utilization of Rented-Second-Hand Products	Design and Use	S5, S6	Leasing second hand office fit outs	R3				X				X							

Legend	R0- R2 = Smarter product use and manufacture	R3- R7 = Extend life of product and its parts	R8- R9 = Useful application of materials

A worksheet for exploring, determining, assessing, and reporting the promotion of CBA in adaptive reuse design (continue)

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