Passive strategies

						Dete	rmina	nts of	Circula	ar Buil	ding A	daptal	bility								X			Εv	/aluatio	on of								
Strategies for						laptab termin			Interro Detern				rculari ermina					Er	nabling	g Facto	ors						Inhibi	iting F	actors					tegies
Circular Building Adaptability in Adaptive Reuse	Phase to implement	Related Layer(s) 51. Site 52. Structure 53. Skin 54. Services 55. Space 56. Stuff	Examples	Related Rs from the R-ladder 80 Refuse R1 Rethink R2 Reduce R3 Re-use R6 Repail R6 Repail R7 Repurpose R8 Recycle R9 Recover	Functional Convertibility	Volume Scalability	Asset Refit-Ability	Configuration Flexibility	Product Demountability	Asset Multi-Usability	Design Regularity	Material Reversibility 🕠	Building Maintainability	Resource Recovery	The building	Collaboration & Partnership/	Presence of Motivated/ 🔇 🌉	Economic Feasibility of Basic Strategies	New Business Models 🕞 🔼	Policy/Legislative Support	Enabling/Digital :	the Project	Quality and Performance			Technical Complexities with Building Products/Materials		Tendency to Follow Traditional Paradigms	Lack of Data and Warranty on Old Materials		Fragmentation of the Building Industry	Effectiveness of the Strategy in Promoting CBA	Applicability in Practice (e.g. Constructability)	Economic Feasibility
L. Design Standardization	Design	S4, S5. S6	Consisted use of walls, doors and windows	R2				×	×		×				×	×					×					×					×	4	3	5
2. Separation of the Building Layers (e.g. Separated Walls)	Design	S3, S4, S5, S6	Partitions are independents connected by dry connections	R2		×		×	×						×											×					×	5	3	4
3. Open the Floor Plan	Design	S 5	Open office space	R2		×		×							×			×									×			×		4	3	3
4. Provision of Multi-Purpose Spaces	Design	S 5	Spaces that can be used as offices and meeting rooms	R1						×					×			×	×							×	×			×		4.5	3	4.5
in Modularization of patial Configuration Layout)	Design	\$4, \$5	Unitized and repetitive pattern of rooms	R2	×						×				×	×		×			×						×			×		4.5	3	4
5. Utilization of Standardized Building Products	Design	S4, S5. S6	Using standardized doors, ceilings and partitions throughout the building	R2							×	×			×			×								×						3	4	4.5
7. Provision of a Core for Building Services	Design	S5	Central area providing an elevator and a shaft	R2	×										×											×	×					3	3	3
B. Design for Surplus Capacity	Design	S3, S4, S5	Oversizing spaces and systems	R1 and R0	×	×	×								×				×			×				×	×			×		4	4	3
9. Compartmentalization of Design	Design	S4, S5	The building is divided into independent zones	R1	×		×								×											×	×			×		4	3	2
LO. Design for a Mixed Use Multifunctionality)	Design	S3, S4, S5, S6	The building includes and can accommodate different function	R1	×										×		×	×		×		×			×	×	×	×		×		5	3	2
L1. Utilization of Secondary Reused/ Recycled) Materials Product	Design	S4, S5. S6	Using second hand furniture	R3 and R8								×		×	×		×	×		×			×	×		×	×	×	×	×	×	5	2	1
L2. Utilization of Biobased Biological) Materials	Design	S3, S4, S5. S6	Using timber-based products	R2								×		×	×		×		×				×	×	×		×			×		4	3.5	2
I3. Utilization of Circular Reusable/Recyclable) Waterials/Products	Design	S3, S4, S5. S6	Glass panels can be reused and recycled at the end of their use	R2								×			×	×	×		×	×			×	×	×		×	×		×		5	3.5	2
14. Alignment of the nterconnection Between the Floor Plans	Design	S 5	Horizontal zones are vertically coordinated with other zones through circulation means	-		×									×														×			3	3	4
15. Alignment of the Building Design with the Real Estate Strategy	Design	S 5	The building horizontal zones are coordinated with other zones	-				×							×						×											4	4	5

Active strategies

Strategies for Circular Building Adaptability in Adaptive Reuse 16. Utilization of Adjustable Building Products/ Components to Users 17. Utilization of Dismountable Building Components 18. Provision of Shareable						Dete	rmina	nts of	Circul	ar Buil	ding A	daptab	ility								Ena	bling	and In	hibitin	g Fact	ors						F	valuati	on of t	he
				Related Rs from the R-ladder R0 Refuse R1 Retisink R2 Reduce R3 Re-use R4 Re-use R5 Refurbish R6 Remanufacture R7. Repurpose R8 Recycle R8 Recycle R9 Recycle		aptabi ermin				elated ninant			cularit rmina					Ena	abling	Facto	rs						Inhib	iting F	actors	S			Strat		
	Phase to implement	Related Layer(s) S1. Site S2. Structure S3. Services S5. Space S6. Stuff	Examples		Functional Convertibility	Volume Scalability	Asset Refit-Ability	Configuration Flexibility	Product Demountability	Asset Multi-Usability	Design Regularity	Material Reversibility	Building Maintainability	Resource Recovery	The building Characteristics	Collaboration & Partnership/ 🗐 🗨 Industrial Symbiosis	Presence of Motivated/	Basic Strategies	New Business Models (Policy/Legislative Support	Enabling/Digital :: Technologies	Location of the Project	Quality and Performance	Social Acceptance	Lack of Expertise	Technical Complexities with Building Products/Materials	Economic Infeasibility of [1] children	Tendency to Follow Traditional Paradigms	Lack of Data and Warranty on Old Materials	Legal and Legislative Restrictions	Fragmentation of the Building Industry	Effectiveness of the Strategy in Promoting CBA	Applicability in Practice (e.g. Constructability)	Economic Feasibility	Over all Score (Average)
Building Products/	Design and use	S4, S5. S6	Folding walls and adjustable office desks	RO and R1		×		×							×											×	×				×	4	4.5	3	3
17. Utilization of Dismountable Building Components	Design and Use	S4, S5. S6	Demountable walls and cubicles	R1		×	×	×	×			×			×	×	×									×	×			×	×	5	4.5	4.5	4
18. Provision of Shareable Spaces	Design and Use	S5	Shareable meeting rooms, shareable kitchens and shareable lounge	R1						×					×				×			×		×				×		×		3	3	5	3
19. Utilization of Renewable Energy Technologies	Design and Use	S3, S4	PV panels and PVT panels	R2										×	×		×				×	×	×	×			×					3	5	5	4
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										×	×								×				×					4	3	4	3.
21. Utilization of Flexible and Integrated Installations (e.g. Integrated MEPs, Plugand-Play)	Design and Use	S4, S5	Integrated wall partitions that bring together different systems (e.g. acoustical insulations and electric connections)	R1			×	×			×															×	×				×	4	5	5	4
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										×									×			×	×				×	5	3	4	
Literature-Based Strategy/Factor	Literature- and Strateg		ased Practice-Based CC	O-Creation-Based Strategy/Factor	Co	-Creatio	on-Base	ed	Theor	y-Pract Linkir	ice-Base	ed	10- R2	= Sma	rter pr	oduct	use ar	nd mai	nufact	ure	R3-	R7 = I	xtend	l life o	f prod	uct an	d its p	arts	R	8- R9 =	Usefu	applic	ation o	f mate	rials

Operational strategies

Strategies for Circular Building																																		on of t
Succession Devilations						aptabil ermina			Interre Determ				cularit ermina					Er	nabling	g Facto	ors						Inhibi	iting F	actors				Strate	
	Phase to mplement	Related Layer(s) S1. Site S2. Structure S3. Skin S4. Services S5. Space S6. Stuff	Examples	Related Rs from the R-ladder R0 Refuse B1 Rethink B2 Reduce B3 Re-use B4 Repair B5 Refurbis B6 Remanufacture B7. Repurpose B8 Recycle B9 Recover	Functional Convertibility	Volume Scalability	Asset Refit-Ability	Configuration Flexibility	Product Demountability	Asset Multi-Usability	Design Regularity	Material Reversibility	Building Maintainability	Resource Recovery	The building Characteristics	Collaboration & Partnership/]	Presence of Motivated/	Economic Feasibility of	New Business Models	Policy/Legislative Support	Enabling/Digital ::	Location of the Project	Quality and Performance Certification	Social Acceptance	Lack of Expertise	Technical Complexities with Building Products/Materials	Economic Infeasibility of	Tendency to Follow Traditional Paradigms	Lack of Data and Warranty on Old Materials	Legal and Legislative Restrictions	Fragmentation of the Building Industry	Effectiveness of the Strategy in Promoting CBA	Applicability in Practice (e.g. Constructability)	Economic Feasibility
3. Provision of hareable Facilities Us	esign and	S4, S6	Shareable office machines	R1						×						×			×	×	×	×	×	×			×					5	5	5
4. Application of (or update D	Design, Use Construction	S3, S4, S5, S6	Recording the performance and properties of all used products	R0					×			×	×		×	×	×				×		×		×	×	×	×	×	×	×	5	5	3
5. Procurement of the Deervice of Building Products Us	•	S3, S4, S5, S6	Leasing elevators, lightings, façade, or fit outs as a service	R1			×			×		×	×			×			×												×	4	2.5	2
6. Selective Dismantling De	esign, Use onstruction	S3, S4, S5, S6	Removing old walls, part by part, to avoid inflicting damage	R3 and R6								×				×	×		×	×					×	×	×	×	×	×		5	2	2.5
	esign, Use onstruction	S3, S4, S5, S6	Send back decorticated ceiling tiles for recycling or reuse	R3, R7 and R8								×				×	×		×	×			×	×	×	×	×	×	×	×		5	4	3
	Design and Construction	S4, S5. S6	Repurposing old timber in other forms of finishes	R7								×				×	×		×	×			×	×		×	×	×	×	×	×	5	4	2
9. Product Exchange	Design	S4, S5. S6	Exchanging old products with providers of second hand products	R2 and R3						×		×				×	×		×	×	×		×	×		×	×	×	×	×	×	5	2	3
0. Implementation of Proactive/ redictive Maintenance	Use	S3, S4, S5	Implementation of a proactive maintenance of the MEP systems	R4									×						×		×				×		×		×		×	4	4.5	3
aman an anta /Custama	Design and Construction	S3, S4, S5	Repairing old storing cabinets	R4 and R5									×				×		×	×					×	×	×		×		×	4.5	4	4
2. Preservation of 🔑 De		S3, S4, S5, S6	Preservation of monumental finishes, doors and windows	R4 and R5								×	×		×		×	×								×	×		×	×		4.5	5	2
t Hallingston of	ocian and	S5, S6	Leasing second hand office fit outs	R3				×				×				×	×		×		×								×	×	×	4.5	2	3.5