

3 Acceptability of design solutions & licences (Building system permission documents)

Sector/field	Qx activities	Methods Procedures	Responsibility	date	Acceptance	Documentation
1 Building	Energy <ul style="list-style-type: none"> • Checking of the plans and desings ^{a,b} • Indicators, target groups for the indicators S1, S2, S3 (<i>quality classes of indoor air</i>) ^{a,b} • Check of targets for energy consumption ^{a,b} Operation <ul style="list-style-type: none"> • Selection criteria for equipments and devices ^{a,b} • User roles and responsibilities ^{a,b} 	<i>a)check</i> <i>b)change</i> <i>c)updating</i> <i>d)comparison to targets</i> <i>e)calculus</i> <i>f)simulation</i>				
2 Spaces	Spaces <ul style="list-style-type: none"> • Mapping of the options ^{a,b,d} • Mapping of the options ^{a,b,e} • Requirements for performance, healthliness, and safety ^{a,b} • Equipment and fixtures in spaces, room cards ^{a,b} 	<i>a)check</i> <i>b)change</i> <i>c)updating</i> <i>d)simulation of conditions</i> <i>e)simulation for education</i>				1) room cards
3 Envelope, walls, roof, base floors, windows and doors	Designs and specifications <ul style="list-style-type: none"> • Recognition of risky spots, door, window and envelope design, tightness, heat bridges ^{a,b} • Selection of types for doors and windows, neseccary special actions (i.e. prevention of structure-borne sound) insulations, selection of energy efficient windows and doors, U-values and penetrating power of solar radiation • Check of natural illumination ^{a,b} • Moisture controls, sensor types and locations ^{a,b} 	<i>a)check</i> <i>b)change</i> <i>c)updating</i> <i>d)risk mapping</i> <i>e)calculus</i> <i>f)simulation</i>				1)memorandums of deviations

4 Air conditioning and cooling system	Validity of plans and designs <ul style="list-style-type: none"> • Standard solutions, requirements for acquisitions ^{a,b} • Certificates and cards for equipment ^{a,b} • Comparison of acquisitions to the targets ^{a,b} • Capacity requirements ^{a,b} • Documentation and support by the suppliers/manufacturers • Limits in contract agreements ^{a,b} • vastaavasti Grouping of air exchange equipment according to the needs of the use in spaces^{a,b} 	<i>a)check b)change c)updating d) LC calculations</i>				<i>1) memorandums</i>
5 Heating system	Validity of designs and plans <ul style="list-style-type: none"> • Control of extra heating etc. in a meaningful way ^{a,b} • Profitable power adjustment for pumps ^{a,c} 	<i>a)check b)change c)updating</i>				<i>1)room cards</i>
6 Sanitary system	Validity of designs and plans <ul style="list-style-type: none"> • Target values for cold and hot water ^{a,b} • Option for separation of consumpition of hot and cold water ^a • Reduction of shower water flow by saving taps or pressure reducing valves for the entire building or specific equipment ^a • Correct adjustment of water flows in the equipment ^a • Profitability and option for reduction of toilet flushing volume ^a • Profitability of insulation for water supply network ^a • Correct temperature for water supply^{a,c} • Option to periodically switch off the floor heating of wet rooms^{a,c} 	<i>a)check b)change c)updating</i>				
7 Electricity system	S Elecrtical network <ul style="list-style-type: none"> • Calculus of need for idle power^{a,b} • Calculus for total output^{a,b} 	<i>a)check b)change c)updating</i>				<i>1)memorandum of deviations</i>

	<ul style="list-style-type: none"> • Functional dimensioning of the access capacity ^{a,b} • Dimensions of fuses, structuring^{a,b} • Meters and methods for consumption measurement^{a,b} • Space specific equipment^{a,b} • Specifications and limits in contract agreements ^{a,b} 					
8 Illumination, lighting fixtures	Solutions for illumination <ul style="list-style-type: none"> • Levels of illumination ^{a,b} • Decline of illumination while lamps age or surfaces get dirty ^{a,b} • Influence of surfaces on illumination (reflectance)^{a,b} 	a)check b)change c)updating d) simulation e)LC calculus				1) room cards
9 Automation, operation and information systems	Specification <ul style="list-style-type: none"> • Specification includes at least the items for objective plan (1. stage) and main design phase (2. stage) ^{a,b} • Full utilization of the supplementary properties offered as a default ^{a,b} 	a)check b)change c)updating				1) designs 2) specifications
10 Other special systems, lifts, sprinklers, communication	Designs and specifications <ul style="list-style-type: none"> • Alarm systems ^{a,b} 	a)check b)change c)updating				
11 Intergration of systems	<ul style="list-style-type: none"> • Logic for joint functioning, timing ^{a,b} • Location and assembly requirements for equipment ^{a,b} • System specifications ^{a,b} • Measuring points for various systems to follow up the performance of entire building ^{a,c} • Targets for coefficient of performance of systems^{a,b} • Specific energy consumption of systems ^{a,b} • Operation and maintenance guidelines and instructions^{a,b} 	a)check b)change c)updating	*)responsibility for total performance			

12 Project management

Compilation of Qx plan and share of responsibilities

- Qx activities in design and site meetings ^{a,b}
- Reaction on deviations ^{a,b}
- Administrative procedures for alterations ^{a,b}

thematic dealing



1) Qx journal