Fr	B	C	NY	S	T	Total
4	8	1	7	4	8	32

Example:
In **Berlin**, major projects are logistically organised in such a way that they affect the normal operations in the city (traffic, noise, etc.) as little as possible. Renovations are planned and executed in such a way that the measures will directly disturb the tenants for as short a time as possible. During the transformation of the „Märkisches Viertel", the work on each flat was limited to a maximum of 10 days. This led, among other things, to increased acceptance among the tenants affected by this.

New York faces the challenge of how the maintenance and preservation of the public infrastructure for the underground network (subway) can be organised so that they cause the lowest level of constraints for the users. The 24-hour operation of the subway network necessitates the decommissioning of individual lines at certain times. At the same time, the number of persons to be transported remains at a constantly high level. Alternative solutions and ideas are still being sought so that both the quality and comfort of the subway network during maintenance work can be upheld and carried out with the lowest possible level of adverse effects (as regards costs, users).

In relation to the construction schedule and construction processes, the city of **Tokyo** exhibits its own specific characteristics, founded both on the relevant regulation as well as on the Japanese mentality. Reducing the burdens associated with building (noise, dust, emissions) during work, e.g. by appropriate containment and the use of low-noise construction equipment, turns out to be important with regard to this in the building sector. When carrying out public works (roads, etc.), a great deal of importance is given to the safety of road users, e.g. by an accordingly large contingent of security personnel or security lighting.

1. Differentiated description of the key field

The key field addresses in particular the construction activities in the city from a process-oriented point of view and with regard to their sequences as well as supportive measures for their regulation. This key field complements above all the key fields of „building standards" and „building certification". It is aimed in equal measure at construction activities in structural engineering (especially buildings) and civil engineering (especially infrastructure networks for mobility, energy, water) as well as at activities for the creation, maintenance, care, servicing or renaturation of the built environment.

The following circumstances may be relevant for regulation in this connection (selection):
- The time when construction work is carried out;
- Who is authorized to carry out the work;
- The site itself, e.g. the manner of logistics supply and accessibility, the construction methods and equipment to be chosen, the protective devices to be used and protective measures to be taken, waste, noise, dust, emissions;
- Environmental and nature protection e.g. measures for soil and water conservation
- Building materials used (recycled materials, etc.) and purchase/procurement of building materials („Green Procurement");
- Type and scope of information to those affected regarding the construction work as well as their inclusion.

Regulation is aimed primarily at minimising the impacts of construction work on their environment or minimising disturbances and pressures on urban dwellers. At the same time, appropriate regulation can, however, exert a specific influence on the selection of resource-efficient building materials. In addition, it can intervene in a supportive way with regard to the maintenance or improvement of the quality of infrastructure systems (e.g. transport networks) of the city through appropriate measures and requirements.

2. Reference to sustainability:

As a place where people live and work, a city must carry out diverse supply functions (energy, food, mobility, housing, capital goods, water, etc.), likewise ensure its own marketability (jobs, economic revenue, etc.), govern and optimise the use of its resources (infrastructure systems) and address the social needs of its urban residents (health, comfort, culture, participation, etc.). The preservation and development or the selective transformation of urban infrastructure represent the most crucial linchpin here.
Appropriate regulation can thus contribute to the realisation of these activities without, for example, increased degradation or loss of comfort for city dwellers (e.g. reasonable transport times or waiting periods when transport systems are being refurbished), while taking into account health and safety (e.g. noise, dust, emission limits) and thus also ensuring the acceptance, quality, competitiveness and resource conservation (also affects a city's existing capital).

The following risks may result if issues are „ignored" or if regulatory measures do not take effect („doesn't work „):
- Growing discontent of urban residents due to increased exposure to non-regulated construction processes
- Rising costs to the economy due to delays and waiting times in freight and passenger traffic
- Inefficient operation or even construction processes of infrastructure facilities or buildings impacts on a city's economy in general

- Pollution of the urban space with noise, emissions

3. Relevance to industrial sectors?

Mobility:	Medium
Energy:	Medium
Production & logistics:	Medium
Security:	Medium
ICT	Low
Water infrastructure:	Medium
Buildings:	High
Governance:	High

Brief description of the high level of importance:
Since, in principle, appropriate regulations for construction sequences and processes can be specified for all urban infrastructure systems, the key field is relevant to all sectors of industry.
Since buildings still represent one of the largest sectors when it comes to construction activities in the city, however, this in particular is of very great significance. Here is where the lion's share of the resources (materials, capital, energy, etc.) is used and, thanks to the diversity of buildings (office, residential, industrial, supply, etc.), there is a correspondingly large potential for regulation.
The key field is likewise of great importance for legislation or urban management, since the necessary regulations must be made binding.

4. Impact:

Positive effects that can be caused by appropriate regulation (selection):
- Minimisation of local impacts caused by construction activities
- Cost and time savings (for business and urban residents) through the standardization of construction processes or regulation of construction times
- Development of new. creative and innovative construction methods and building equipment and concepts for efficient site logistics and construction phase planning
- Increased acceptance of urban residents because comfort and health are assured
- Safeguarding of the quality of infrastructure systems
- Awareness raising and anchoring of sustainable procurement processes („Green Procurement")

Negative impacts that may be caused by regulation of the construction sequences and processes (selection)
- Decreased construction activity due to higher hurdles/restraints for those involved in construction
- Increased costs due to the need for „night work" and increased administrative costs during construction (proof that the regulations are being complied with)

5. Implementation measures:

- Acknowledgement and exchange of views regarding the objective and content of the regulation between city/business/research
- Monitoring for quality assurance and adaptation in the case of „not working out"
- City survey: To what extent do urban residents feel hampered or harassed by construction activities and why? How satisfied are the urban residents with the quality of urban infrastructure? To what extent are they are willing to accept any disturbance and over what period?
- Economic survey: What role does the construction company/construction industry itself regard itself as playing with regard to „sustainable construction sequences and processes" and which of the company's own requirements are already being implemented? Which requirements/freedoms are important in order to invest capital in the city in the form of construction? What construction sequences and processes are maybe critical areas and require regulation or should be regulated as little as possible (in order to maintain competitiveness for example)?

6. Actors: Who can shape things? With whom?

The city itself as well as the people involved in the construction (planners, contractors, project managers, etc.), other companies in the construction industry or related research facilities can cooperate as actors for the key field. Their aim could, for example, be to examine or discuss the feasibility (e.g. in terms of cost) and practical suitability of existing and/or planned regulations, or to examine them with regard to future sustainable urban development objectives from an urban, economic and research perspective.

7. Prerequisites:

Prerequisites for successful adoption and implementation could be (selection):
- Existence of a control mechanism or control instance with the possibility of checking whether the set requirements are actually feasible and practicable
- Monitoring for quality assurance and adaptation in the case of „not working out"
- Practicality/feasibility of regulated areas
- Knowledge and exchange of views regarding the objective and content of the regulation between the city/business/research

8. Obstacles/barriers:

The following obstacles and barriers can perhaps prevent targeted adoption or implementation (selection):
- Economic constraints (cost, time, etc.)

- Constraints on comfort (maintaining 24-hour operation)

9. Indicators:

The following information can be used to deal with solutions in the key field:
- Scientific or market studies or city statistics that shed light on completed and planned construction activities as well as their characteristics, risks, challenge
- Knowledge of previous regulations
- Studies/surveys of urban residents with regard to the acceptance of construction projects, satisfaction of completed construction projects, potential for improvement

10. Special features/remarks: