



Site Master Planning of Industrial Areas

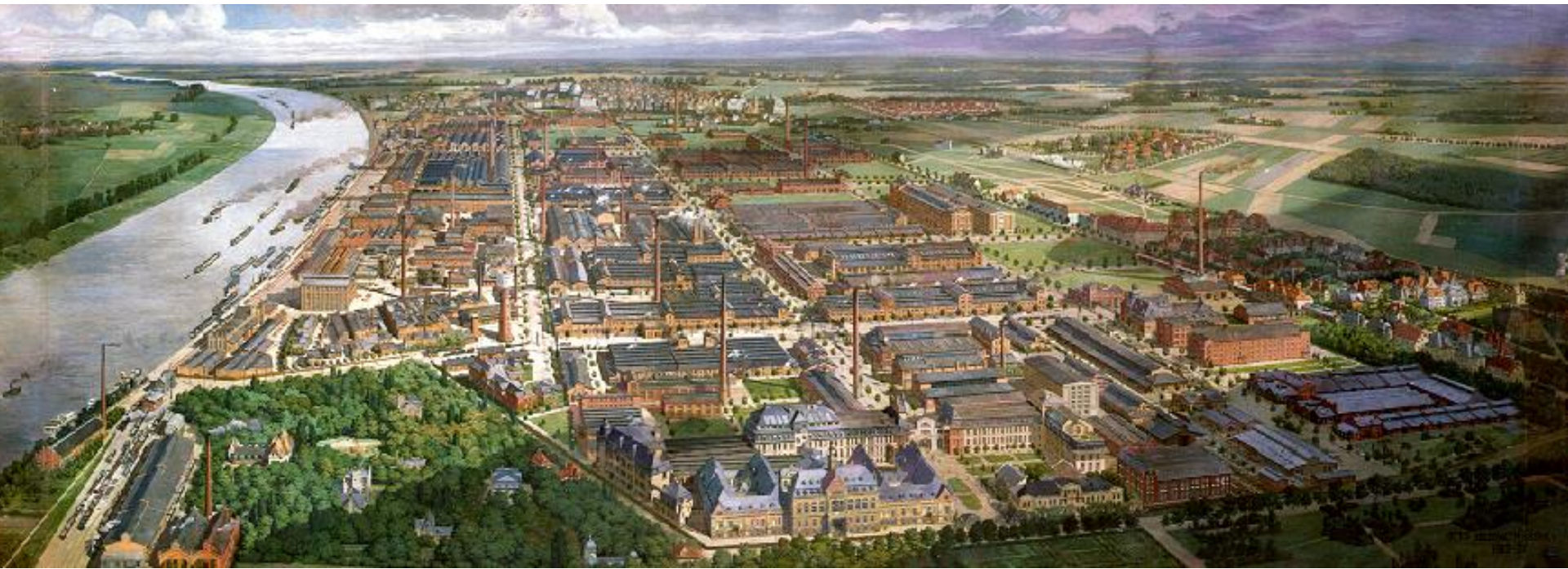
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Integrated SIA – BAYER Leverkusen / Germany

- › Design of companies in the 19th century:
- › Structured sites based on material flow
- › work places and residential areas side by side



Integrated SIA - Dubai Silicon Oasis / Dubai



LEGEND:

	Emirates Road		Path to Summer Villas		Path to Headquarters		Path to Technopoint		Path to Light Industrial Unit		Path to The Seven Towers
	Al Ain Road		Path to Cadre Villas		Path to Silicon Residence		Path to Operation Centre		Path to HI Bay		

Integrated SIA – Messestadt Riem / Germany



Feasibility Studies

1. Environmental impact assessment (EIA) based on the “fully occupied” SIA .

This requires:

- Vision of the future development of the SIA
- Key performance indicators (KPI) for planning and impact assessment
 - Compulsory by legal regulations
 - By experience
 - By surveys

- How to describe the development of the SIA until fully occupied?

2. Site Master Plan for the SIA

Site master plan for SIA

Holistic approach for planning and management of SIA:

- › Guideline for the development of the industrial park.
- › Action line for the industrial park

Based on KPI:

- › Priority criteria for industrial sectors to be invited or refused,
- › Urbanisation structure, infrastructure corridors,
- › Traffic patterns, connection to external infrastructure
- › Security of the industrial park, logistics patterns
- › Disposition for utility generation and distribution
- › Pathways for environmental protection
- › Shared services, public facilities and public spaces
- › Concepts for resources conservation.

Site Master Plan – the procedure

Tasks to be fulfilled:

- › considering different scenarios for the development of the SIA
- › developing alternative conceptual designs
- › evaluating the alternatives (Scorecard, SWOT),
- › sharing their contribution to sustainable development
- › participative approach with all stakeholders
- › adjusting the alternatives to the business model of park operation

Site master plan for SIA – Urban planning

Axe d'urbanisme - Services centraux



SIA Urban Planning – Green Areas

Strengths and weaknesses of the SIA become evident in outer appearance, quality of living, management of buildings and surfaces.

SIA Concept of green areas with water bodies



From the project „zeroemissionpark“.

Quelle: Figge Architekten

SIA Logistics – Transfer of Transportation

Example of a public transportation network in an industrial area



From the project „zeroemissionpark“.

Environmental impact assessment and site master plan

EIA

- Impact of emissions
- Scarcity of resources
- Risks induced by operation or natural
- Integration of the SIA into the environment
- Resilience of the environment



Site Master Plan

- KPI of fully occupied park
- Industry characteristics
- Imposed limits on utilities consumption
- Imposed limits of emissions
- Traffic patterns

➤ **EIA and site master plan have to be elaborated in close cooperation**

Experience in some countries

- In some countries industrial installations are allowed in industrial parks only
 - Authorities and design offices act in formal procedures - not in entrepreneurial content
 - Basics are developed superficially only - Facts seem of little importance
 - Land for industrial parks is selected on real estate criteria
 - No concept planning and evaluation of scenarios
 - No interaction between the players - no team-building at different levels
 - Environmental aspects are often not or only superficially considered, EIA are performed on current situation only

- In these countries, significant changes are required in planning and approval processes

Approaches for improvement and consulting

- «Mind Set»: positive attitude to «sustainability».
- Conceptual planning: Feasibility studies:
 - Site selection criteria
 - Integration of industrial parks in the economic context
 - Profound EIA based on future development
 - Application of site master planning
- Management: Site operator: Professionalization of services and governance
 - Capacity building
 - Team building, cooperation
 - (SWOT) analysis
 - Facts-based working
- Cooperation:
 - Team building
 - Stakeholder management
 - Development of regional clusters involving the industrial park