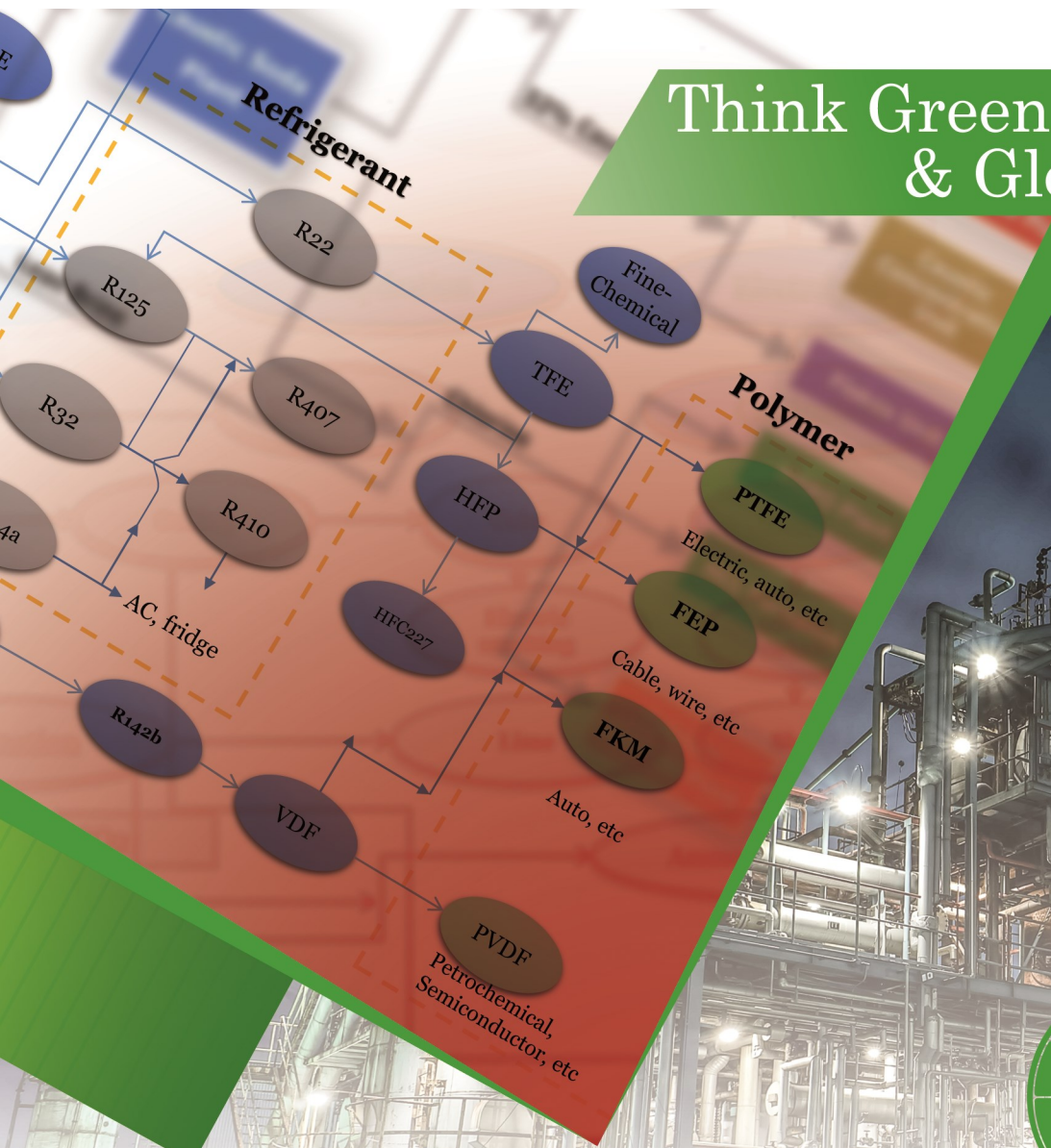


Think Green
& Global

2019



ICPPDC
IRANIAN CHEMICAL PARKS DEVELOPMENT CO



Content



ICPDC at a Glance 1

Project Operation & Services 7

Project Map 18

ICPDC at a Glance

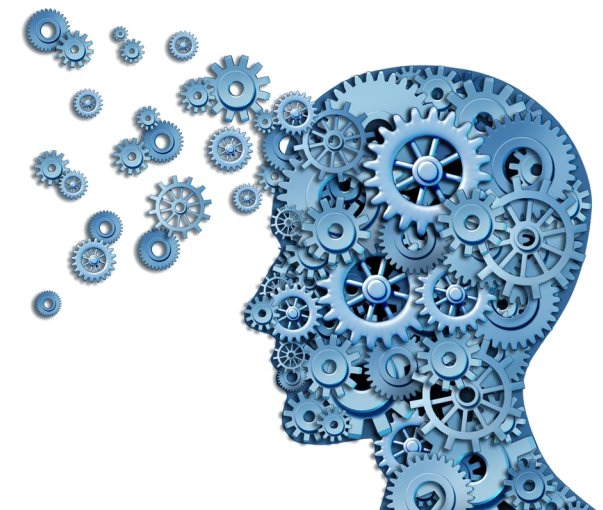




Iranian Chemical Parks Development Company (ICPDC) was founded based on need for value chain vision in the Iranian industry, as well as, intensive necessity of Industrial Parks in Iran and Middle East. Industrial Parks is a progressive development pattern which focus on the integration design of industrial plants and service units instead of individual and independent units with goal of optimizing the value chain.

ICPDC “as a fully private company” consults and cooperates with governmental/non-governmental organizations and companies in a wide range of project disciplines like design, scientific and industrial consulting, Industrial Parks design & establishment, pre-investment phases, management consulting and etc.

ICPDC has been consisted of experienced team in professional consulting and trading services for Industrial parks design or development. We cooperate with customers in order to reimagine the world into a more productive and sustainable development future. This rule is the reason that our clients choose us again and again.



Chief Executive Officer



Mr. Behzadnejad is the founder and Managing Director of Iranian Chemical Parks Development Company (ICPDC).

He is a recognized leader in the industrial Parks establishment in Iran who has delivered transformative growth in previous roles businesses. Mr. Behzadnejad has experience for leading all aspects of strategy, operations, design, and marketing. He strives to bring a strong center for creating growth and developing and delivering solutions to meet industry needs.

Having 15 years of experience in different Industries, he has focused on Chlor-Alkali Industry for more than 8 years.

He holds a BSc. in Chemical engineering and a Master of Business Administration (MBA) from outstanding Iranian universities.



Executive Board



Mr. Dolatabadi

Chief Technical Officer

MS holder of Chemical Engineering
8 years experience



Mr. Zarfeshani

Chief Operating Officer

BSc. holder of Civil Engineering
15 years experience



Mr. Ghasemi

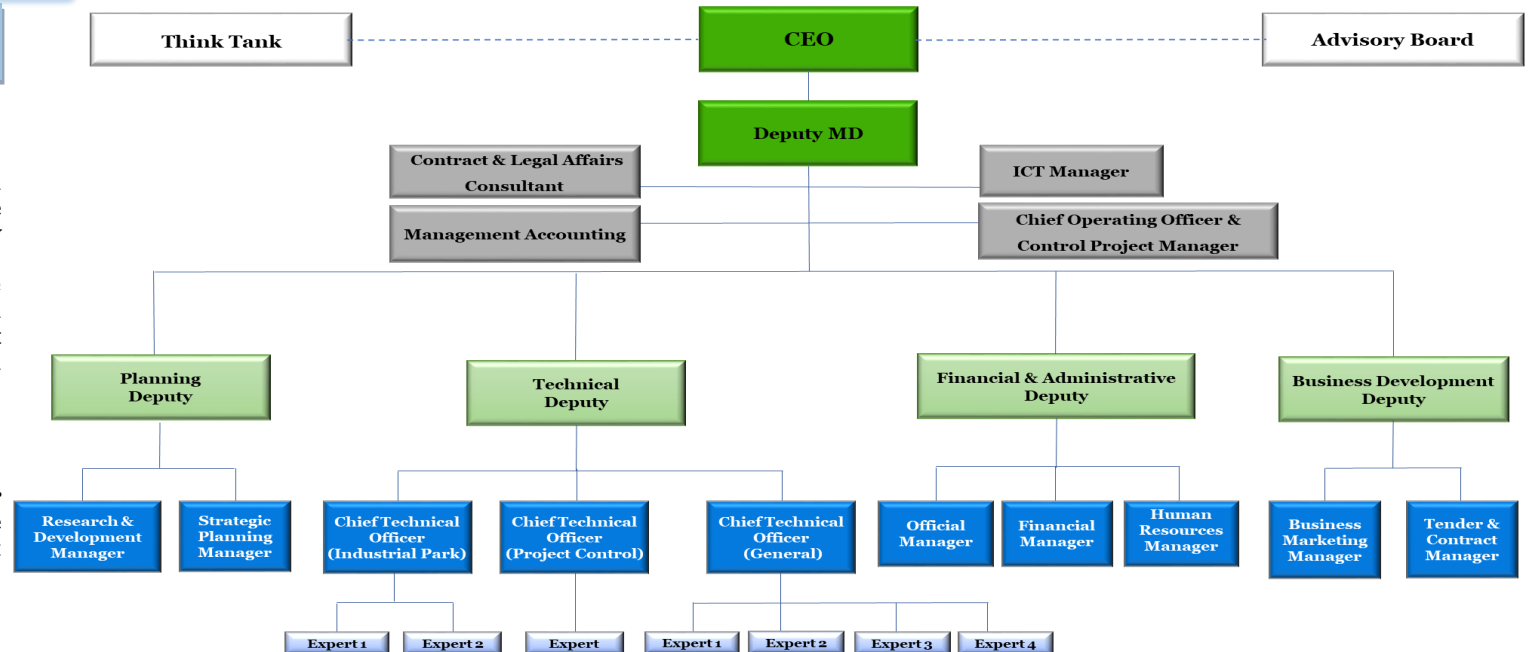
Chief Technical Officer

MS holder of Chemical Engineering
10 years experience

Our Team

In order to further the goals and performance of the company, the strategic committee of the company formed with some engineers, managers and consultants. They are expert in their own business field and are advanced in different disciplines. They meet weekly and make advices for ICPDC strategies, plans and projects.

Think tank has been formed by the creative people to present ideas for the objective and performance of the company as well as conduct researches.



The staff of ICPDC cooperate with customers in order to build long-term relationships with customers and suppliers based on good faith, trust and respect. As part of our corporate strategy, our aim is to be responsible for our services quality that we offer to customers.

Cooperation



In order to perform the plans, ICPDC strives to establish effective communication with other domestic and foreign companies, which can take place in a variety of areas such as following:

- Manufacturers and construction companies;
- Investors;
- Data providers;
- EPC companies;
- Knowledge-based companies;
- Policy-making centers;
- International Industrial Parks;
- Licensors;
- Facilitator Organizations;
- Financial organizations & Banks



Responsibility

Responsible behavior is very important for ICPDC to:

- Create win-win situations for society, the environment, the industrial project and the Group,
- Secure the social acceptance of business operations,
- Gain access to new resources,
- Attract employees, contractors and investors.

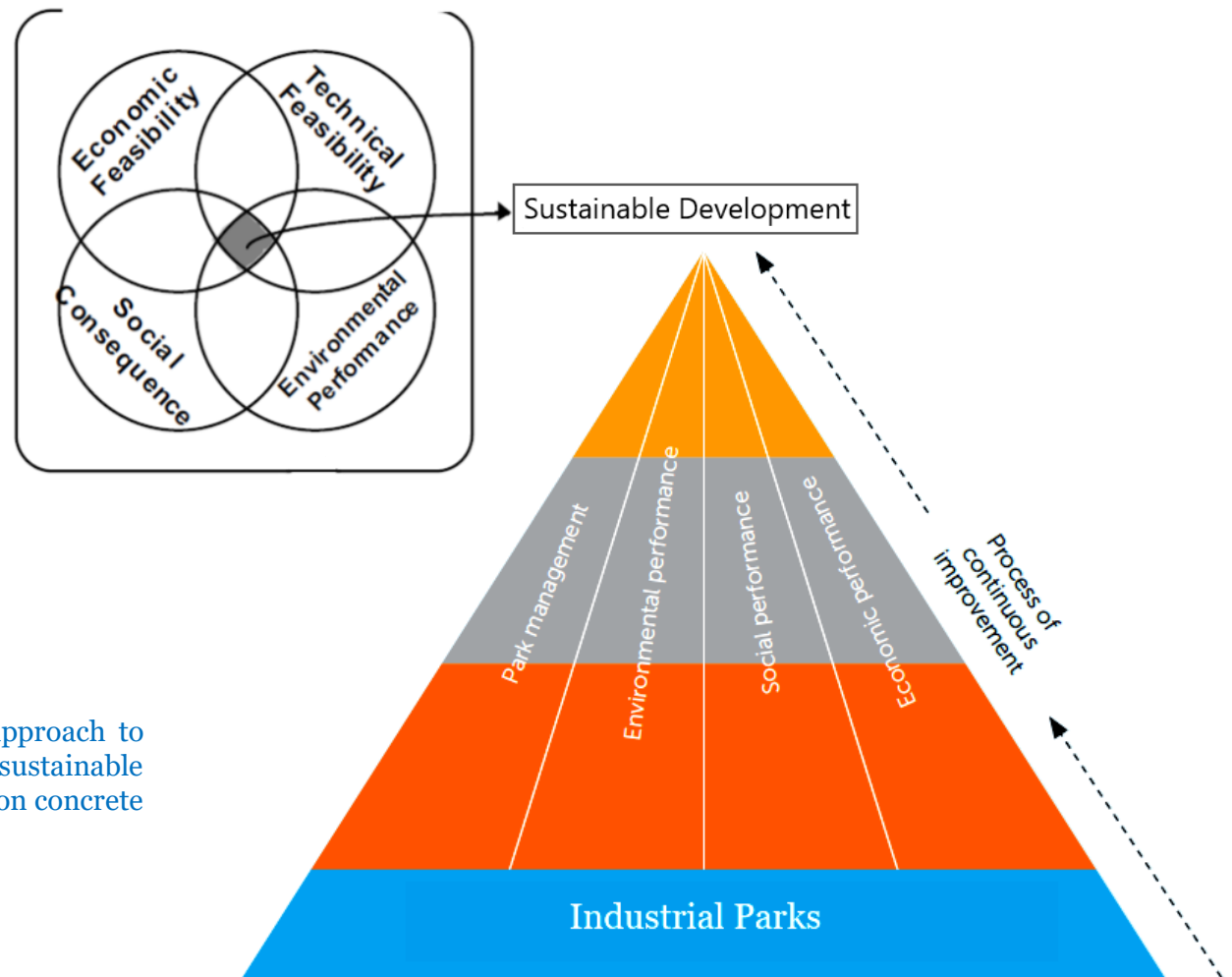
ICPDC assesses and considers existing, future and potential regulations, voluntary and mandatory agreements relevant to the sector and countries of operation.

The ICPDC sustainability strategy Resourcefulness brings together the commitments on health, safety, security, environment, business ethics, human rights, diversity and stakeholder engagement.

Our working definition of “Industrial Ecology” is an approach to managing business, industrial, and human activity on a sustainable basis. In turn, EIPs have become one of the most common concrete applications of industrial ecology.

ICPDC is continuously striving to develop and improve its solutions and technologies. The group’s objective is to provide the clients with efficient, competitive solutions, while also focusing on development sustainability.

A full evaluation framework for an industrial park combines economic, technical, social, and environmental objectives into a whole system, known as Eco-Industrial Park (EIP). This means that an EIP project can seek a design that optimizes objectives in these four domains as a whole, not separately.



Project Operation & Services



SERVICES

ICPDC is a globally recognized consulting and service leader that provides innovative solutions to industrial and chemical companies, investors, government entities, utilities, energy enterprises and the other clients all over I.R. Iran.

ICPDC provides deep technical expertise and regional knowledge to improve customer engagement, boost operational efficiency, reduce costs and achieve superior business results.



Our Services

General

Industrial Park

Sustainable Development



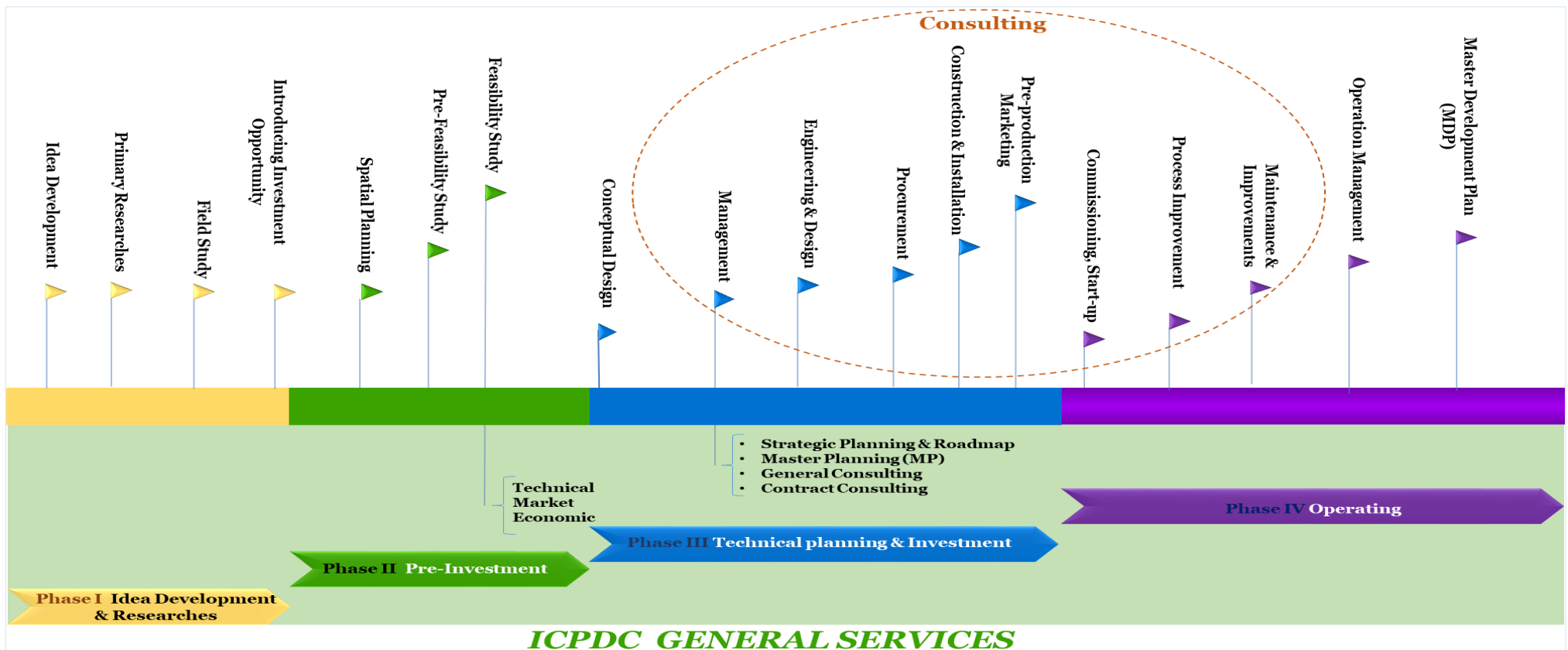
ICPDC provides general services in four phases, including:

Phase I: Idea Development & Researches;

Phase II: Pre-Investment;

Phase III: Technical Planning & Investment;

Phase IV: Operating.



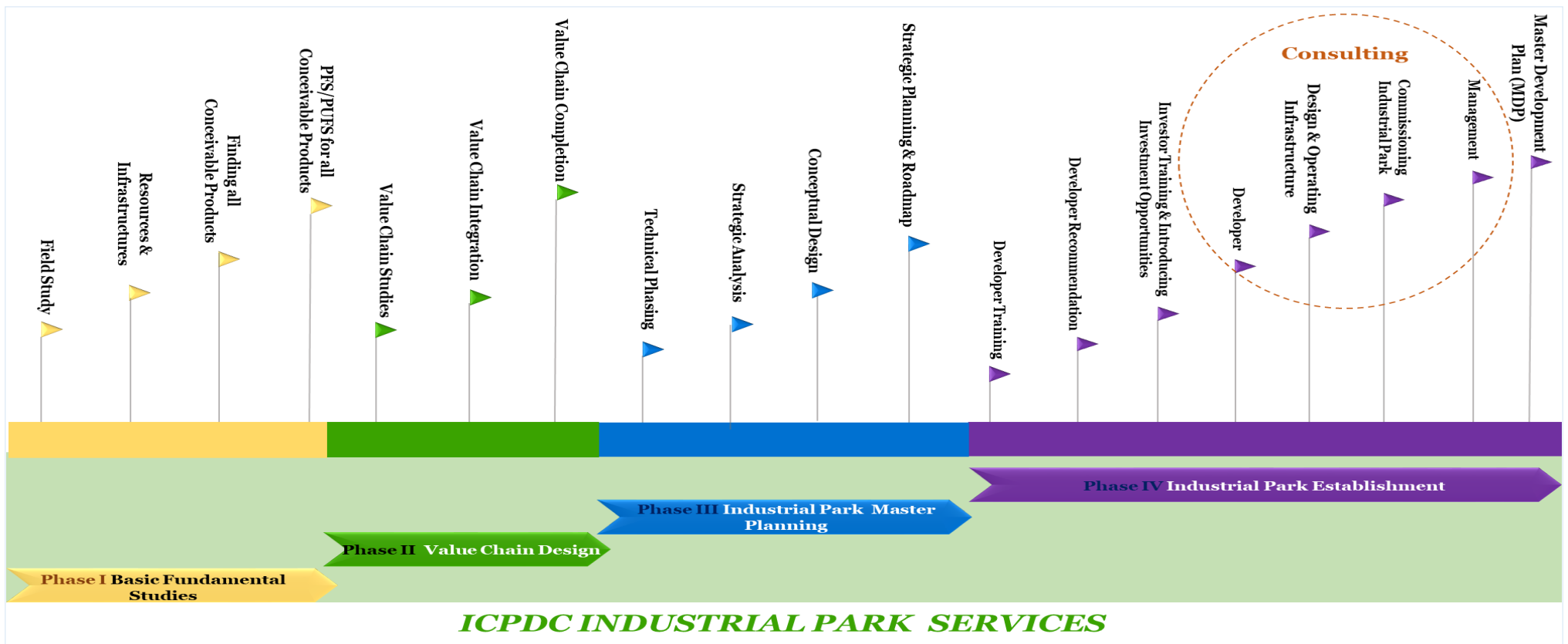
There are 4 phases to design and establish an Industrial Park:

Phase I: Basic Technical studies;

Phase II: Value Chain Design;

Phase III: Industrial Park Master Planning;

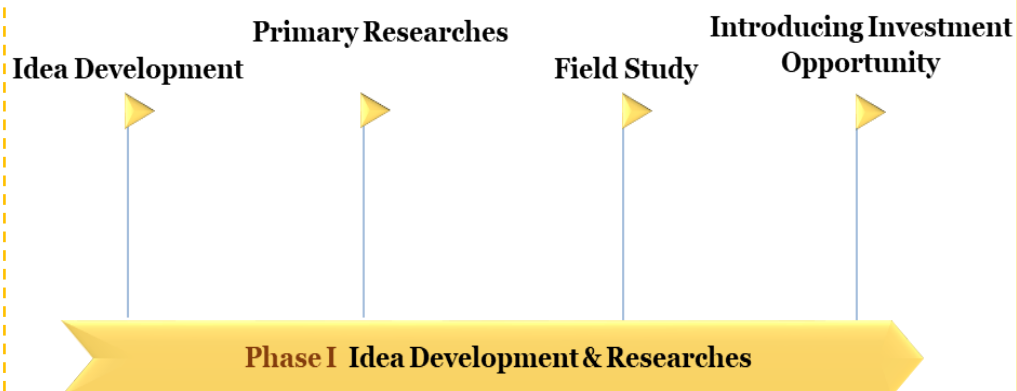
Phase IV: Industrial Park establishment.



ICPDC General Services

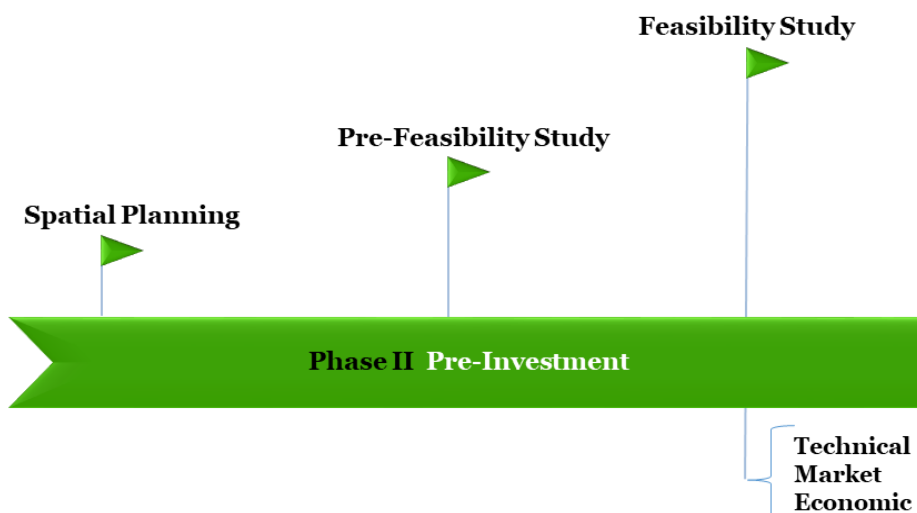
Phase I Idea Development & Researches

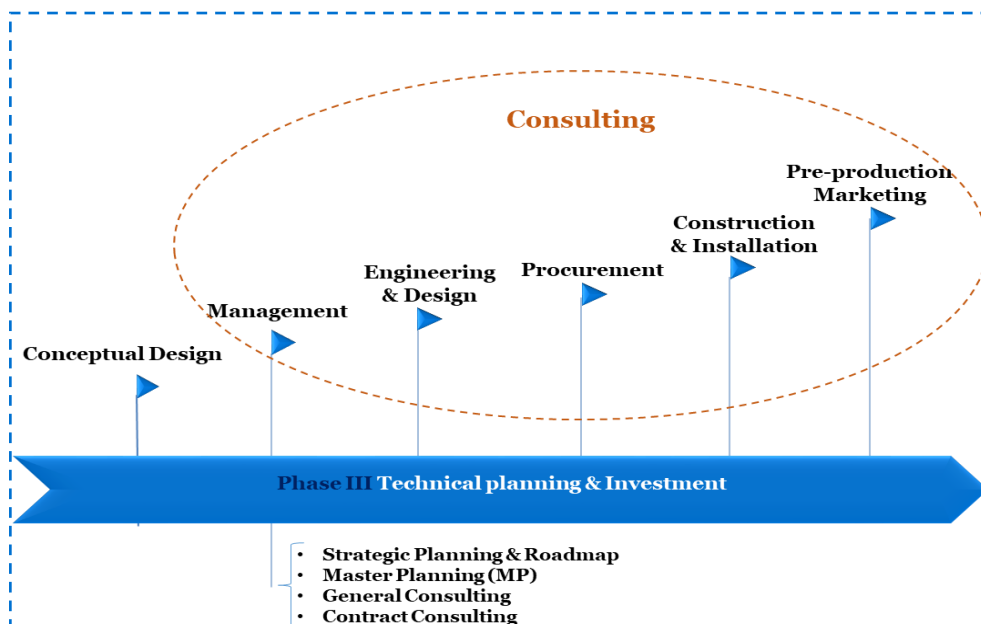
In this phase ICPDC provides the opportunity to support the technical/ economic/ improvement ideas that are considerable in terms of investment and proposed by the third party/ investors/ ICPDC's knowledge resources. the potential ideas are investigated in respect with local and time circumstance. considering the knowledge of market analysis and technical experience of ICPDC, possible ideas are selected and introduced to investors. According to the company's access to sources of venture capitalist, ideas can be interred into the pre-investment phase.



Phase II Pre-Investment

The ideas that have passed the initial filters in phase I and have more potential for investing are studied profoundly in this phase. In order to develop potential ideas into investment phase, ICPDC investigates an idea in terms of marketing/ technical and economic feasibility. Eventually this phase should provides a comprehensive feasibility study and all data necessary for entering into the investment phase.

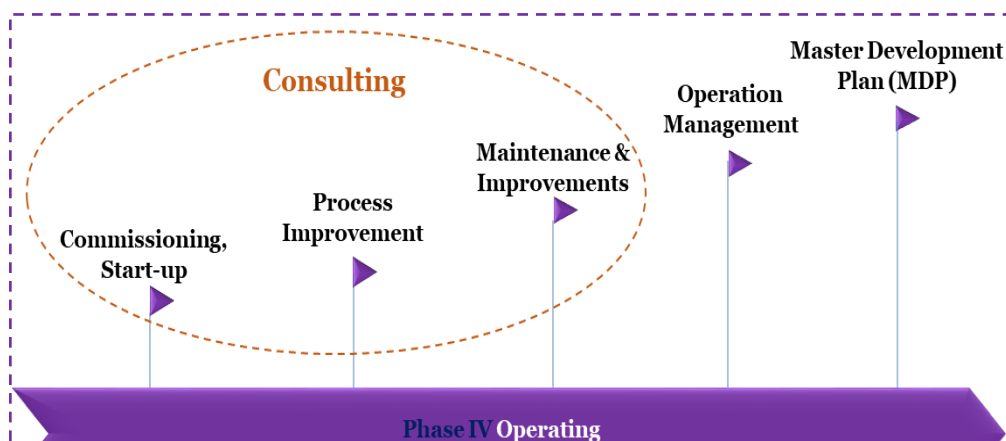




Phase III Technical Planning & Investment

Technical planning & investment phase is an essential and complicated stage for the construction of an industrial unit. After the feasibility study for a project, this phase begins with conceptual design of the project, continues with strategic management and leads to conduct an EPC contract. In this phase a set of interdependent parameters such as scientific, technical, financial, environmental, social, political and strategic analysis are used for choosing technology, contractor and market.

ICPDC with expert team and outstanding consultants can carry out or provide specialized consulting in each stage of management, master planning, contracting and implementation. Investors can be sure of their investment achievement, relying on experience, technical team, consultants and company expertise.



Phase IV Operating

Operation of industrial units with the highest efficiency is one of the goals of this phase. In this regards, the improvement and optimization of the processes and associated marketing networks are very important. Providing a comprehensive and sustainable MDP for existing units is part of the objectives of this phase. With respect of MDP, the futuristic view to develop and redevelop an industrial plant has been realized.

ICPDC as a recognized consultant with its skillful specialists and potent databases can help producers and investors in all stages of an industrial unit operation.

ICPDC Industrial Parks Services



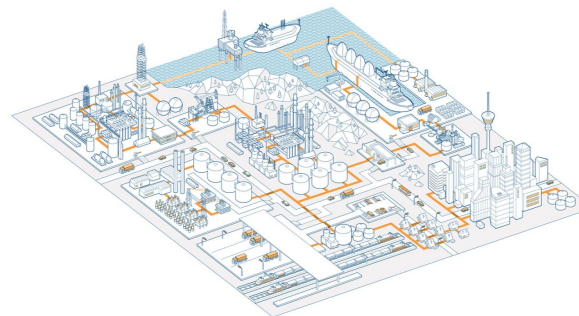
Industrial Park establishment as a new progressive pattern for economical and industrial development, is based on the integration of processes instead of the individual and independent units. In other words, Industrial Parks emphasize the integration design of industrial plants, services and utilities with goal of optimizing the value chain through collective interactions between units and achieving sustainable development. This approach in accordance with reference rules of Islamic Republic of Iran, leads to value chain development, proper use of local resources, and achievement of competitive advantages and synergy benefits.

The features provided by this approach include the diversification of products along with their economic benefits, utilizing each other's by-products and wastes, raising economic efficiency, environmental sustainability and, ultimately, the economic development of societies.

The superior strategy in Industrial Parks establishment is assessment of the right place for each individual process unit in value chain in order to take advantages and gain benefits of integrity.

ICPDC can promote investment into the Iranian industrial parks through collaboration, cooperation and united understanding. We also seek to localize the methods for designing and implementation industrial parks.

We have also proposed a comprehensive package for promotion and advancement of Industrial Park in Iran. This package includes Iran existing condition of industries audit, benchmarking of some advanced Industrial Parks of the world, and localization of Industrial Parks design and implementation.

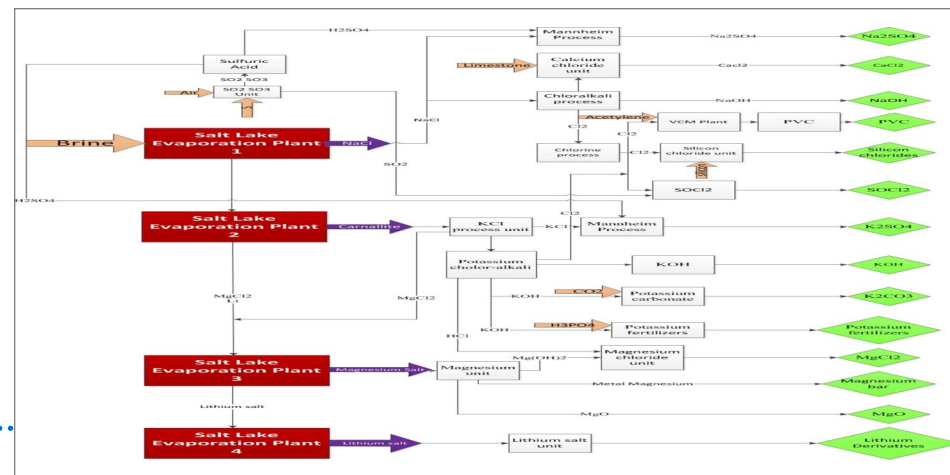


There are 4 phases to design and establish an Industrial Park:

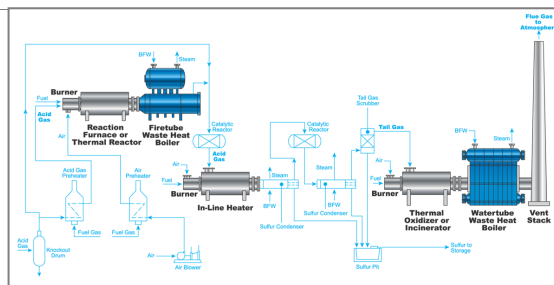
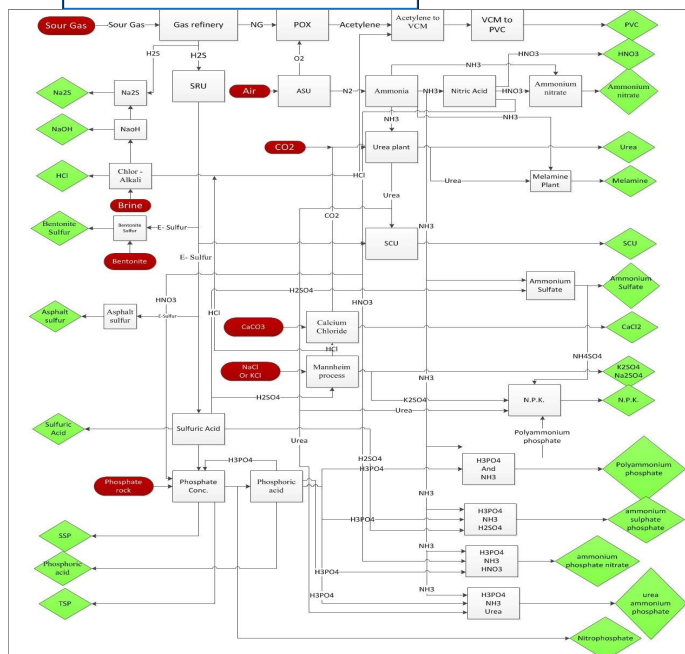
- 1– Basic Technical studies;
- 2– Value Chain Management;
- 3– Industrial Park Master Planning;
- 4– Industrial Park establishment .

Industrial Parks Opportunities

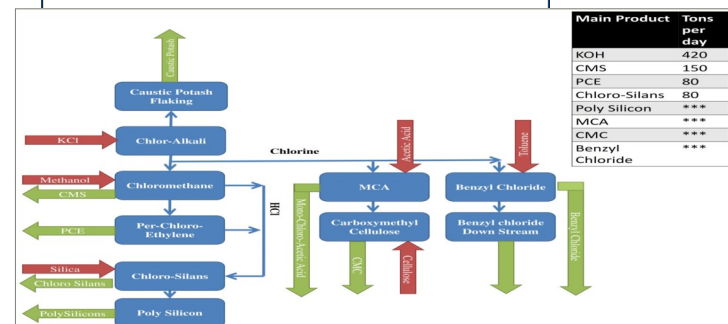
1- Salt Park



2- Sulfur Park



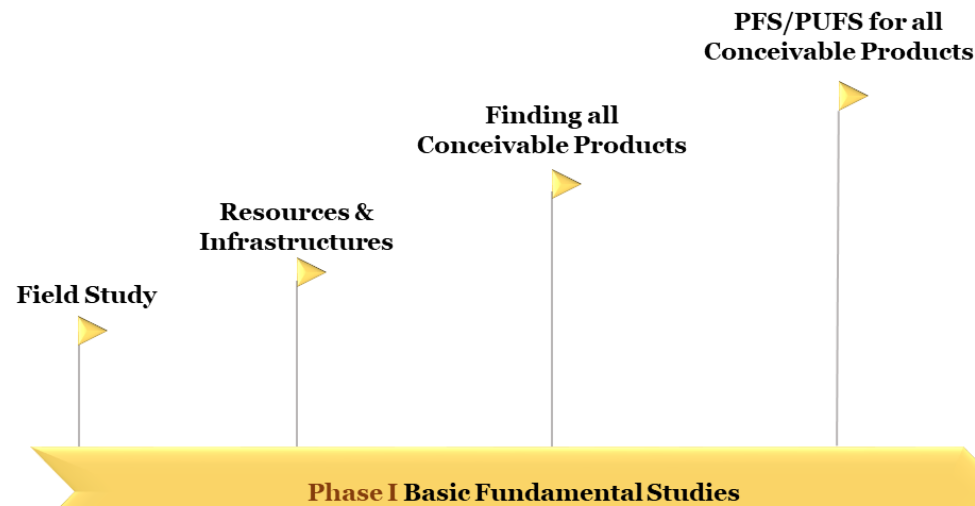
3- Mineral/ Chemical Park



Main Product	Tons per day
KOH	420
CMS	150
PCE	80
Chloro-Silans	80
Poly Silicon	***
MCA	***
CMC	***
Benzyl Chloride	***



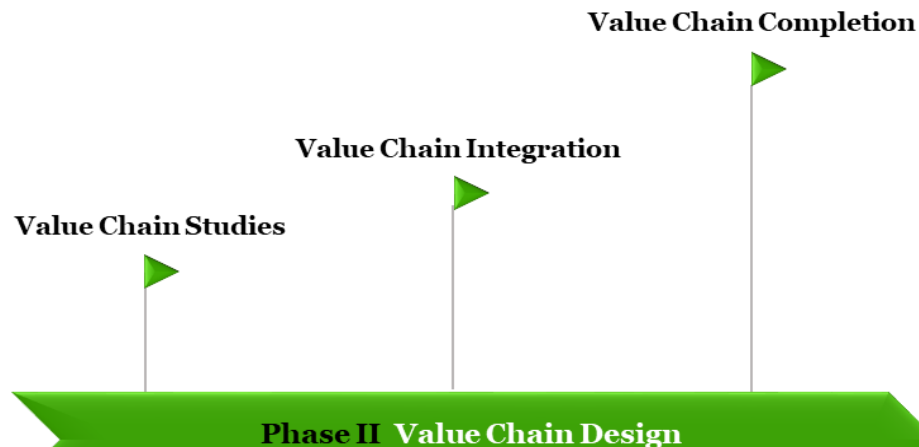
ICPDC Industrial Parks Services



Phase I Basic Technical studies

Basic technical studies phase includes investigation and introducing the main resources and infrastructures in the area of project location, introducing possible products based on resources, carrying out the pre-feasibility studies/ pre-unfeasibility studies of these products.

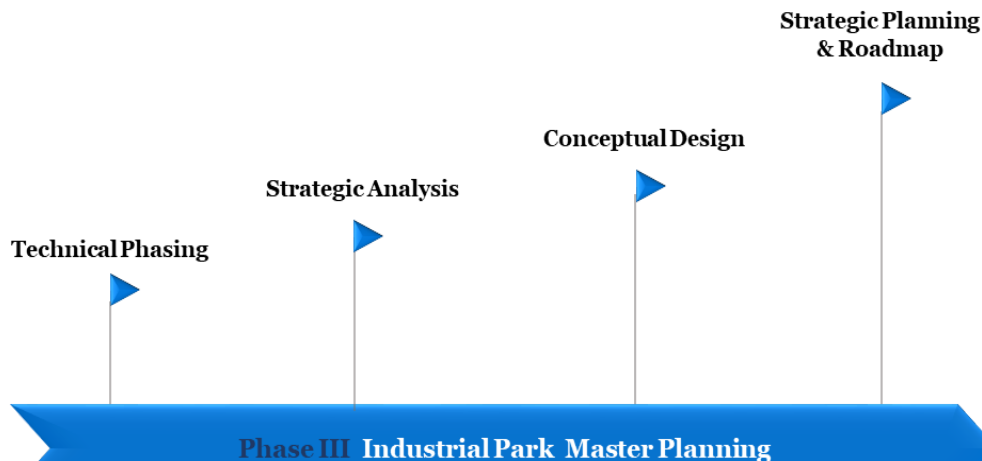
ICPDC performs this phase in four stages. At first, location study or field study is conducted to determine the climate characteristics, geographic features and seismicity for specified area. Then specialists collecting data about all raw materials, existing and possible infrastructures, all feedstocks/ products/ requirements of active and under-construction plants, and human resources in desired region of the area by direct observation, interviewing, self-analysis and investigation of official documents. In the next stage, all conceivable products are introduced by brainstorming and pre-feasibility studies in three market/ technical/ financial aspect are provided for these products. Finally, the list of possible products are identified.



Phase II Value Chain Design

Value chain means a set of follow-up activities which leads to create value by producing goods/ services with value added from basic raw materials. Value chain management is also about identifying high-performance industrial/ service units, putting them in the right place of the value chain for taking the competitive advantages and gain benefits of integrity.

Moreover, the correct alignment of the intermediate products, ancillary materials and activities for wastes disposal is important stage of value chain design in order to complete the value chain.



Phase III Industrial Park Master Planning

Ultimate objective of this phase is providing Master Plan of an Industrial Park. This document is not just a layout plan but has much greater complexity and value. It is a challenge which leads to enhance production and maximize net profit. At first, the value chains which is created in previous phase are studied for managing the priority of processes and units.

Then strategic issues such as Park Business Model, technology transfer, and environmental/ social/ political feasibility of park are analyzed. In the next step, concept study is performed to depict a concept of basic parts of industrial units, chains and park. Items such as Block Flow Diagram (BFD), primary process simulation, process selection /requirement/strategy, cost Estimates (APEX & OPEX), Layout and ... should be considered as target of conceptual design strategy to minimize the likelihood of error, manage costs, Assess Risks, and evaluate the potential success of the intended project. Phasing execution is planned with regards to phasing of investment, prioritization of time, prioritization of ownership and... . Finally roadmap enables decision makers craft decisions that can achieve the most desirable outcome.

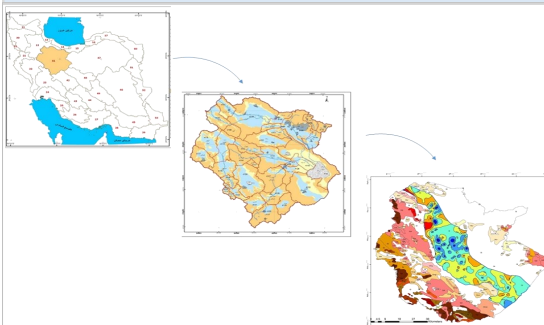


Phase IV Industrial Park Establishment

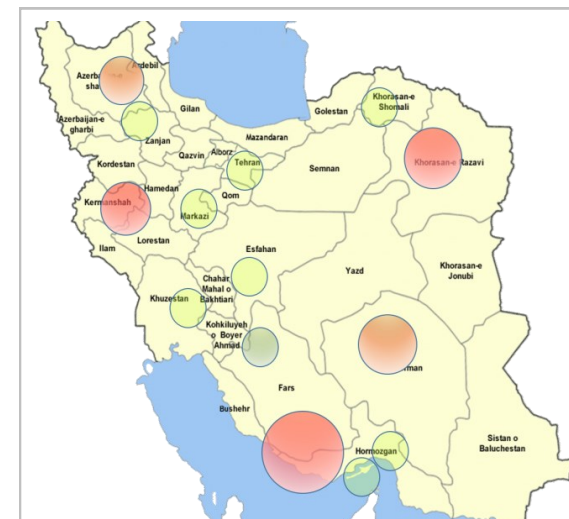
The last phase is the result of all the stages that have been taken in previous phases. ICPDC provides a comprehensive plan to establish industrial parks, and in this regard potential developers and investors will be trained to get acquainted with and assume their core duties in establishment of an industrial park. Moreover, ICPDC could support them in all relevant works and services and help organizing the management structure of park. Eventually, we would provide Master Development Plan (MDP) which outlines a vision to guide growth and development of an industrial park over the next decades.

ICPDC Sustainable Development Services

1-Spatial Planning



ICPDC investigators observe resources and collect data and materials from various scientific and experimental sources. Observation may be either direct, where the investigator is actually present during the task, or indirect, where the task is done in the office. The method is useful to gather chemical parks requirements and also for studying currently executed processes and units.



2- Dust Control



There is the need to develop soil management practices such as using mulches. Different types of materials such as wheat straw, plastic film, wood, sand, oil layer, ... could be used as mulch.

Due to the high exorbitant price and environmental issues of oil mulch, it is inevitable to use alternative mulch like mineral mulch. In comparison with oil mulch, mineral mulch has several advantages: Mineral mulch provides a better soil environment; moderates soil temperature; increases soil porosity and water infiltration rate during intensive rain and controls runoff.

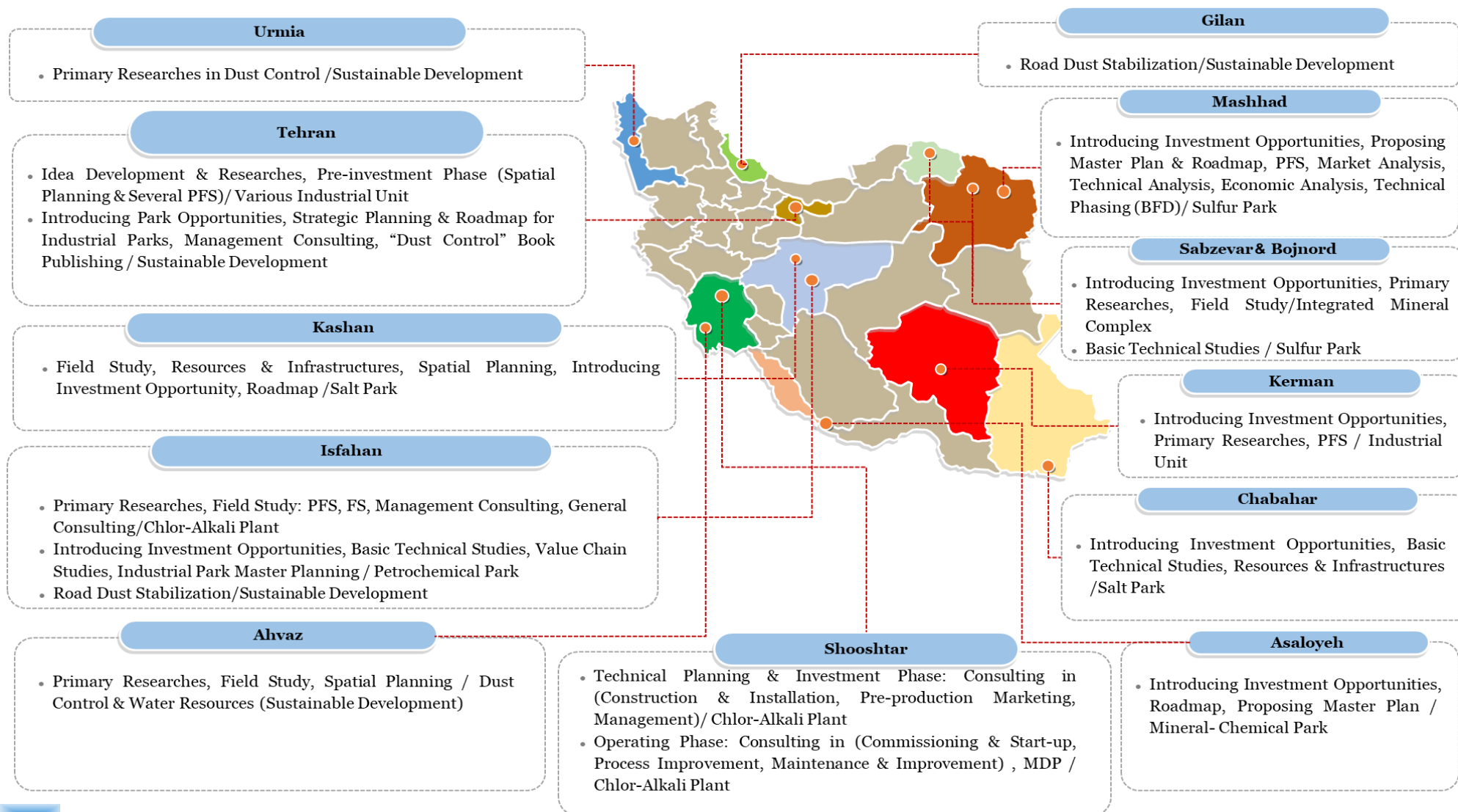
Mineral mulch prepared by ICPDC is eco-friendly, non-toxic and not harmful to humans, animals or plants when properly applied. In addition, our teams prep road or desert properly and perform follow up maintenance.

Benefits of a dust control & Road Stabilization program:

- Reduces dust-related human respiratory health problems;
- Reduces impacts on vegetation and other aquatic life, and water quality.
- Reduces unpaved road maintenance costs,
- Permeability and suitable conditions of soil for plant growth,
- Lack of heavy metals entrance into the soil.

Project Map

Each industry and each client have their nuances. There are certain types of projects, however, Here we describe some common types of projects.



Note

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ICPDC
IRANIAN CHEMICAL PARKS DEVELOPMENT CO



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