



“High-Tech Composite Medical Complex” Development Project

The Case of Performance
in Construction Management Services

2014.03. .

sunjin ENGINEERING &
ARCHITECTURE

Contents

An aerial, high-angle view of a modern university campus at night. The campus features several large, multi-story buildings with illuminated windows and facades. The buildings are interconnected by walkways and surrounded by landscaped areas with trees and smaller structures. The overall scene is dimly lit, with the primary light sources being the campus's own lighting, creating a glowing effect against the dark background.

1. Introduction of Business

2. Characteristic of Business

3. Business management focus and strategy

I . Introduction of Business

Business Overview (Daegu, Gyeongbuk)

대구신서, 충북오송
첨단의료복합단지



사업명	대구경북첨단의료복합단지 핵심연구지원시설건립사업
사업위치	대구광역시 동구 동래동 241번지
지역지구	준주거지역/지구단위계획구역
대지면적	70,100 m ²
연면적	51,508 m ²
구조	철근콘크리조,경량철골조
용적율	59.25%(법정400%이하)
시행사	대구경북첨단의료산업진흥재단
사업기간	2009년 7월 ~ 2013년 11월
건설사업관리	(주)선진엔지니어링컨소시엄
설계	(주)삼우종합건축사사무소컨소시엄
시공	삼성물산(주)외 15개사

Business Overview (Osong Biovalley)

대구신서, 충북오송
첨단의료복합단지



사업명	오송첨단의료복합단지 핵심연구지원시설건립사업
사업위치	충북 청원군 오송읍 오송생명로 123
지역지구	준공업지역/지구단위계획구역
대지면적	77,978 ㎡
연면적	45,414 ㎡
구조	철근콘크리조, 경량철골조
용적율	50.15%
시행사	오송첨단의료산업진흥재단
사업기간	2009년 7월 ~ 2013년 11월
건설사업관리	(주)선진엔지니어링컨소시엄
설계	(주)삼우종합건축사사무소컨소시엄
시공	삼성물산(주)외 15개사

Construction forwarding schedule

대구신서, 총복오송
첨단의료복합단지

1997

- 1997.09.23
국가산업단지 지정고시
- 1997.
오송생명과학단지 지정

2005

- 2005.10
제1차의료산업
선진화위원회
첨단의료복합단지
조성방침결정

2003

- 2003.07
오송생명과학단지
기반공사착공

2008

- 2008.03.28
첨단의료복합단지 지정
및 지원에 관한 특별법
제정
- 2008.07.04
오송추진단설치
- 2008.11.04
첨단의료복합단지위원회 구성
- 2008.12.05
대구경북유치위원회 발족

2009

- 2009.08.10
첨단의료복합단지
유치확정
오송 및 대구경북첨단
의료복합단지 입지선정

2010

- 2010.01.27
첨단의료복합단지 조성
기본계획수립
대구 : 합성신약/IT
오송 : 바이오신약/BT
- 2010.03.03
기본 및 실시시설계용역 당선
(해안,삼우)
- 2010.07.15
Service contract of Construction Management
and starting of construction
- 2010.12.
첨단의료산업진흥재단 설립

2012

- 2012.06.29
임상시험신약생산센터
설계완료
- 2012.07
임상시험신약생산센터
파일공사 및 터파기

2011

- 2011.05.31
Completion of design
- 2011.10.05
삼성물산 선정
- 2011.10.24
Commencement of work
- 2011.10.27
기공식

2013

- 2013.08.30
Construction Completion
- 2013.09~11
밸리데이션 및 시운전
- 2013.11.20
재단이전
- 2013.11.21
Dedication ceremony

Organization of Construction Management

대구신서, 충북오송
첨단의료복합단지

Design phase(15)

Ordering
Organization

Design Advisory
committee

책임사업관리자(단장)
선진 김 택 응

Resident Project Manager(7)

Special Areas Advisory

Nano Fab / BIO Design

실험 동물 관리 전문가

ICR / BCR

의약품 / 시설인증 컨설팅

Nonresident Project
Manager(7)

건 축
수석감리사
선진/추 승 욱

토 목
수석감리사
ITM/권오익

기 계
수석감리사
ITM/박성철

전 기
특 급
휴다임/명갑태

통 신
특 급
선진/기용권

소 방
특 급
해원까치/이주철

제 약
특 급

기 획
특 급

선진/김일원

건 축
특 급

선진/심근섭

토 목
특 급

ITM/신용국

기 계
특 급

ITM/고춘기

전 기
특 급

휴다임/추재효

통 신
특 급

선진/윤석권

제 약
특 급

Organization of Construction Management

대구신서, 충북오송
첨단의료복합단지



Front view (Daegu-Gyeongbuk)

대구신서, 충북오송
첨단의료복합단지



New Drug Development Center
(Daegu-Gyeongbuk)

Medical Device Development
Center (Daegu-Gyeongbuk)

Clinical Drug Manufacturing Center
(Daegu-Gyeongbuk)

Laboratory Animal Center (Daegu-Gyeongbuk)

Medical Device Development Center (Daegu-Gyeongbuk)

대구신서, 총복오송
첨단의료복합단지



Laboratory Animal Center (Daegu-Gyeongbuk)

충북오송
심판의료복합단지



New Drug Development Center (Daegu-Gyeongbuk)

대구신서, 충북오송
첨단의료복합단지



Clinical Drug Manufacturing Center (Daegu-Gyeongbuk)

대구신서, 충북오송
첨단의료복합단지



Front view (Osong)

대구신서, 충북오송
첨단의료복합단지



New Drug Development Center (Osong)

Medical Device Development Center (Osong)

Clinical Drug Manufacturing Center (Osong)

Laboratory Animal Center (Osong)

Medical Device Development Center (Osong)

대구신서, 충북오송
첨단의료복합단지



Laboratory Animal Center (Osong)

대구신서, 충북오송
첨단의료복합단지



New Drug Development Center (Osong)

대구신서, 충북오송
첨단의료복합단지



Clinical Drug Manufacturing Center (Osong)

대구신서, 충북오송
첨단의료복합단지



|| .Characteristic of Business

Characteristic of Business



Bio/BT
Part

합성신약/IT
Part

Characteristic of Business



충북오송
Osong



Bio
Part

Leading business in support
of national treasury

Support on
research
facilities

Core
infrastructure

주거
시설

민간투자
시설

커뮤니티
시설



합성신약/IT
Part

III .Business management focus and strategy

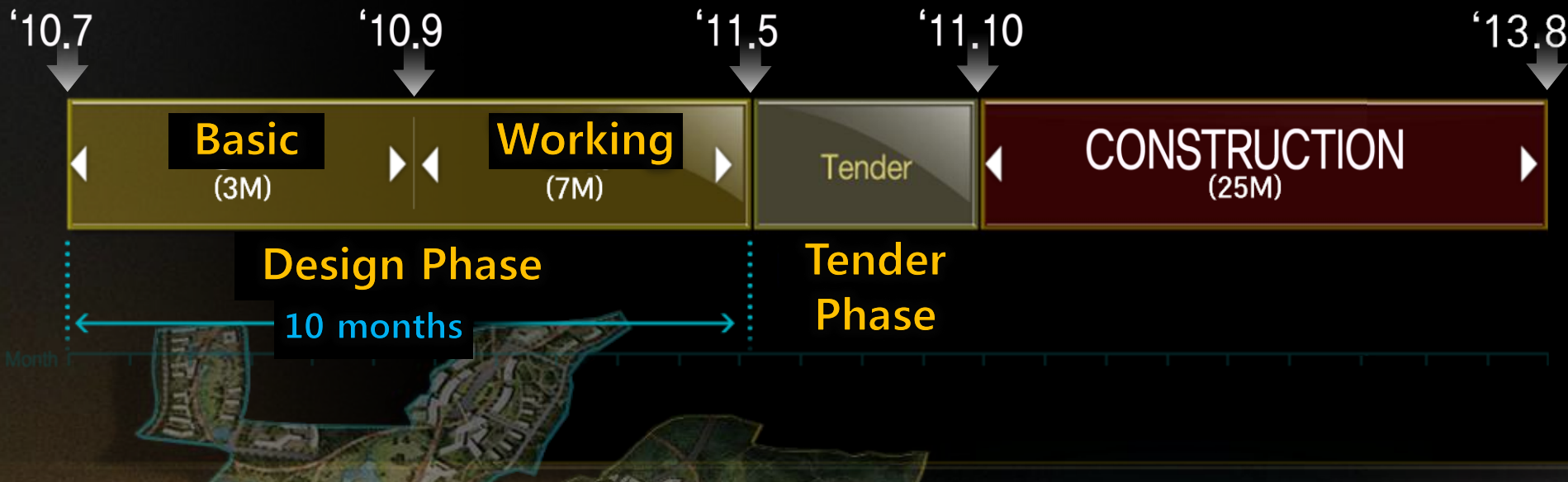
Business management focus

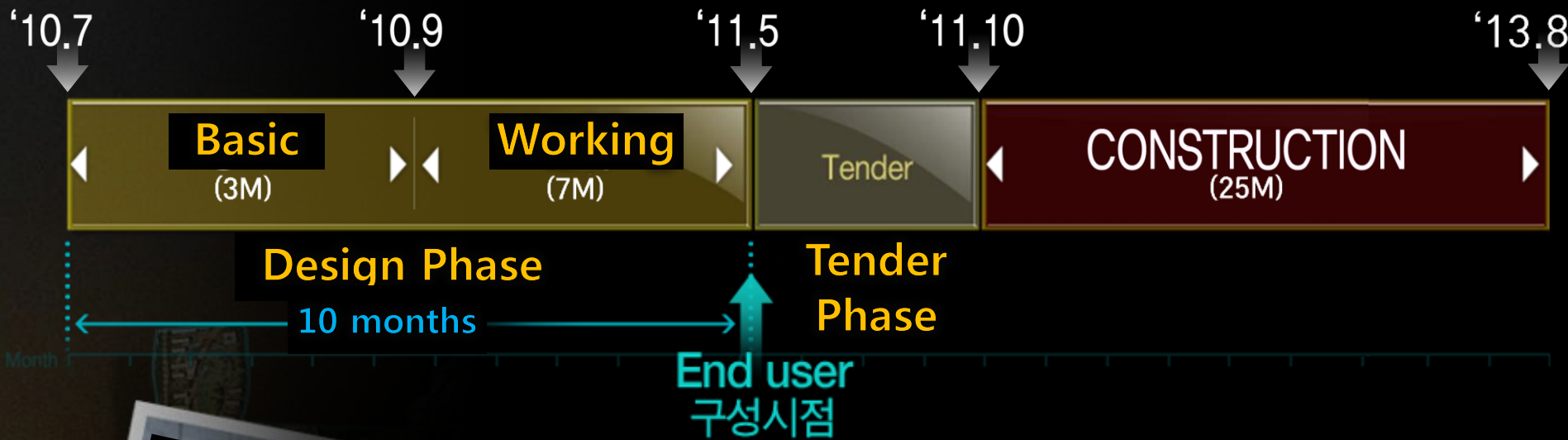
Design quality



Embodiment of
high quality
building







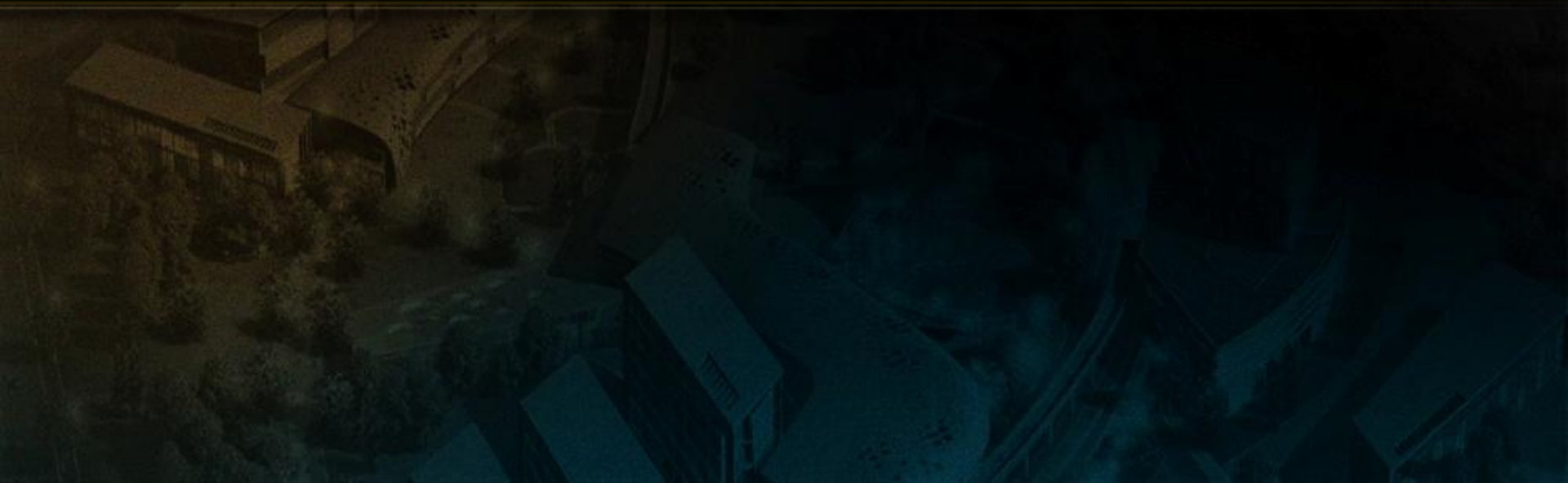
Design delay

Absence of End user

Design Management

I. Core Strategy

Maximization of design
quality through 3 step
management system



I. Core Strategy

Maximization of design quality through 3 step management system

맞춤형 서비스



COMMUNICATION 유도
행정업무 과다소요
관급자재심의

I. Core Strategy

Maximization of design quality through 3 step management system

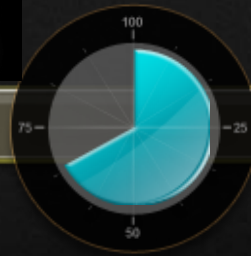


Degree of completion of Design quality

I. Core Strategy

Maximization of design quality through 3 step management system

Step 1 (Design Phase)



Concretization

Generalization

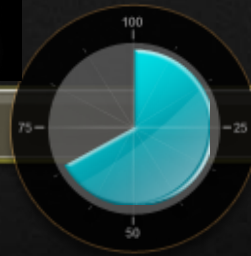
End User
Undesignated phase



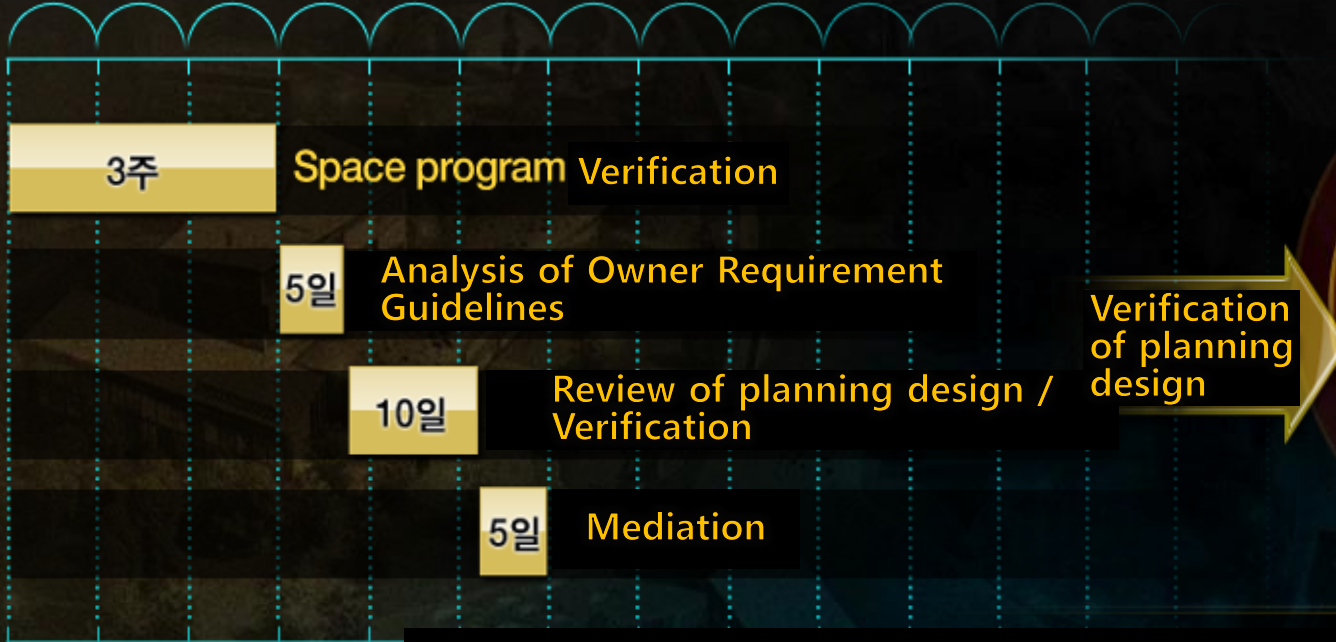
I. Core Strategy

Maximization of design quality through 3 step management system

Step 1 (Design Phase)



1week 2week 3week 4week 5week 6week 7week 8week 9week 10week 11week 12week 13week 14week



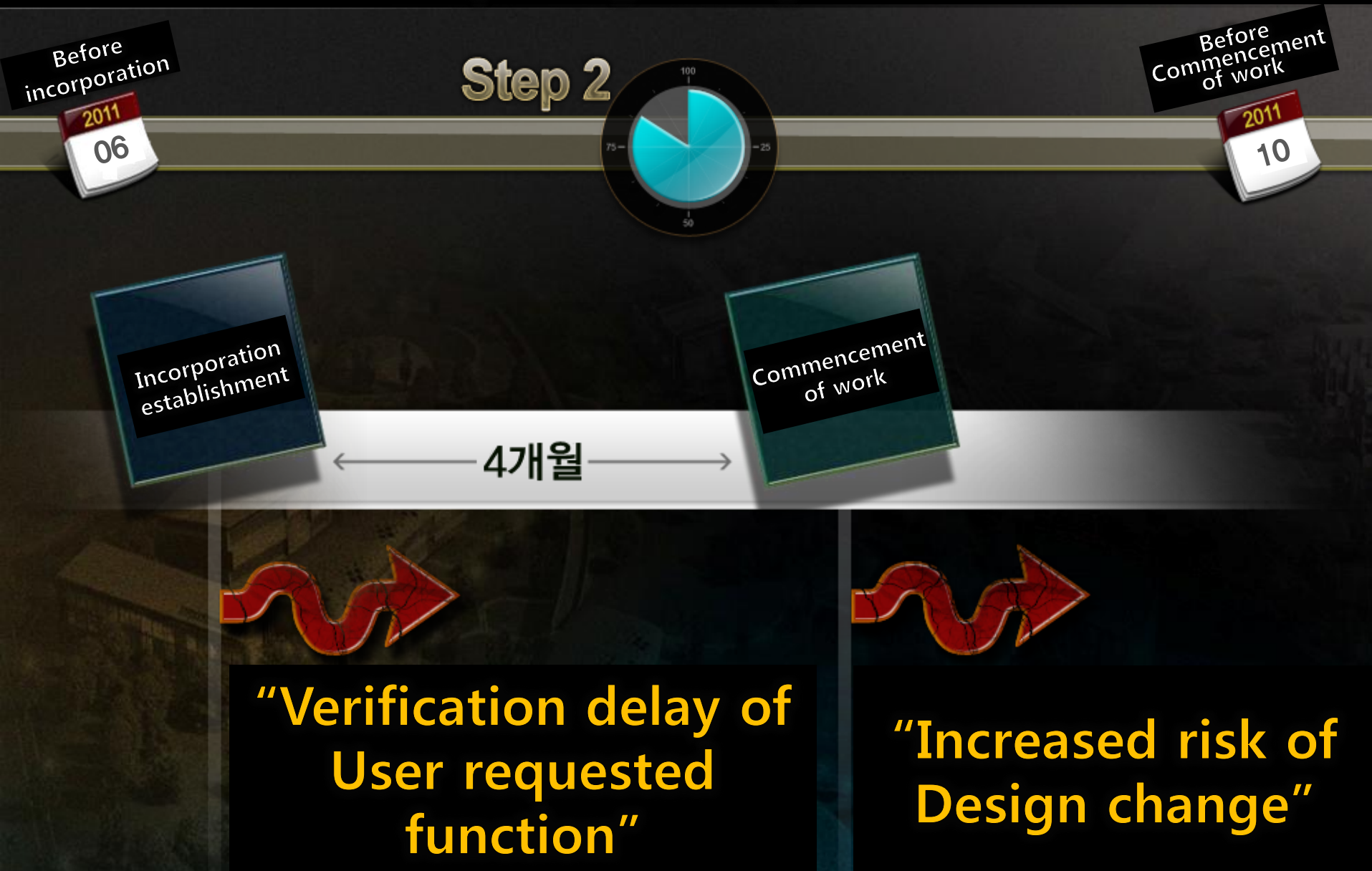
Verification of planning design

Detailed Engineering Schedule 작성

Prevention of time-wasting and delay

I. Core Strategy

Maximization of design quality through 3 step management system



I. Core Strategy

Maximization of design quality through 3 step management system

Before
incorporation

2011
06

Step 2



Before
Commencement
of work

2011
10

Grasp of User
requested function



Verification about
Design plan



I. Core Strategy

Maximization of design quality through 3 step management system

Before
incorporation

2011
06

Step 2



Before
Commencement
of work

2011
10

1

Acceptable regulations of Requirements range



Choice of requirements by specific questionnaire

Minimization
of decision-
making
period of
Owner

I. Core Strategy

Maximization of design quality through 3 step management system

Before
incorporation

2011
06

Step 2

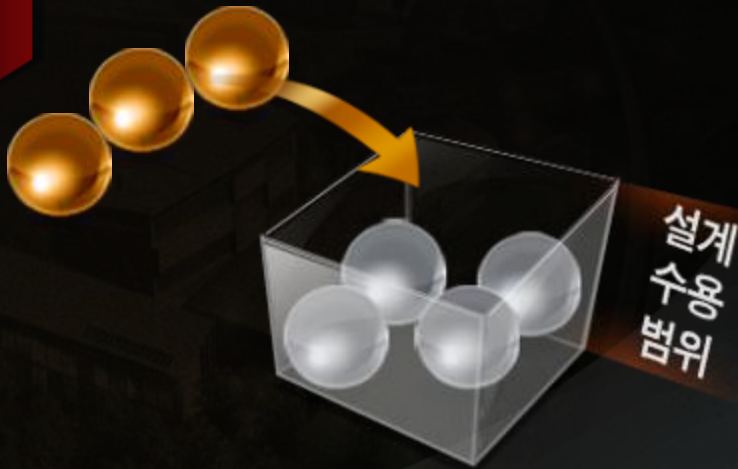


Before
Commencement
of work

2011
10

2

Suggestion of multiple alternatives about additional requirements



Minimization
of Design
change

I. Core Strategy

Maximization of design quality through 3 step management system

Before
Commencement
of work

2011
10

Step 3



Before
Construction
Completion

2013
08

Contract / Changes of required
room environment of confirmed
experiment equipment



Changing requirements of Owner
in materialized point of building



I. Core Strategy

Maximization of design quality through 3 step management system

Before
Commencement
of work



Step 3



Before
Construction
Completion



*Contract / Changes of
required room environment
of confirmed experiment
equipment*

Distribution of work
planning calendar
about experiment
equipment
Laboratory

Application of
requirements / Set up
latest point



I. Core Strategy

Maximization of design quality through 3 step management system

Before
Commencement
of work



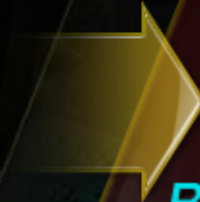
Step 3



Before
Construction
Completion



*Changing requirements of
Owner in materialized point
of building*



**BIM
3D Modeling**

**Minimization of changing
in finish stage**



I. Core Strategy **Maximization of design quality through 3 step management system**



	Idea	Selection Idea	Cutting the cost	Enhance the functionality	Sum(million)
Basic	24	19	16	3	1,846
Working	26	18	16	2	1,448
Construction	15	13	11	2	1,256
sum	65	50	43	7	3,550

총65건중 50건채택:35.5억원 사업비절감

Reduction of 35.5 billion won through the Design · Construction VE



2013. 7. 18 KOICA global apprentices, visiting the site

Business management focus

Design quality



Embodiment of
high quality
building



II. Core Strategy

Realization of optimum
function
as the core facilities

Realization of
high-quality facilities



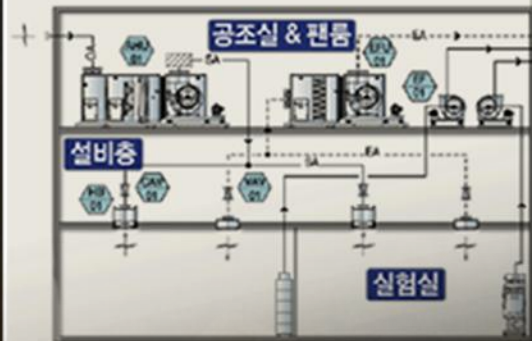
Certification of
environmentally friendly
architecture



II. Core Strategy **Realization of optimum function as the core facilities**



Prevention of cross-contamination



Air conditioning system of clean room



Laboratory Animal Center



Management
experience
manager
of similar
facilities

Clarification of
facility characteristics

Expert of
each area

II. Core Strategy **Realization of optimum function as the core facilities**



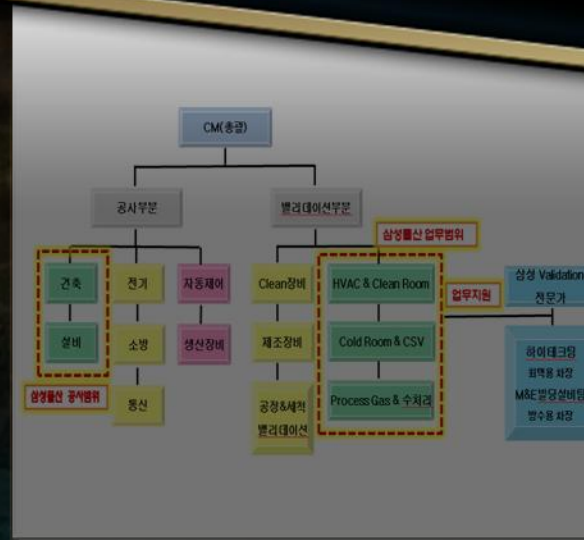
Management
experience
manager
of similar
facilities

**Management of
special facilities**

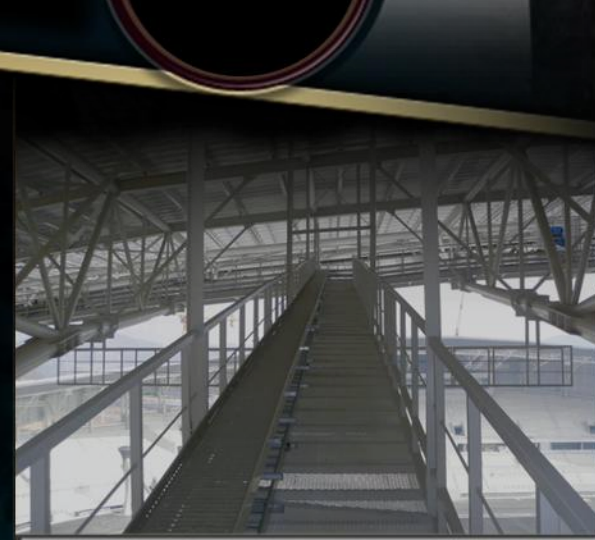
Expert of
each area



CLEAN ROOM



VALIDATION



CAT WALK

II. Core Strategy

Realization of optimum function as the core facilities



II. Core Strategy

Realization of optimum function
as the core facilities

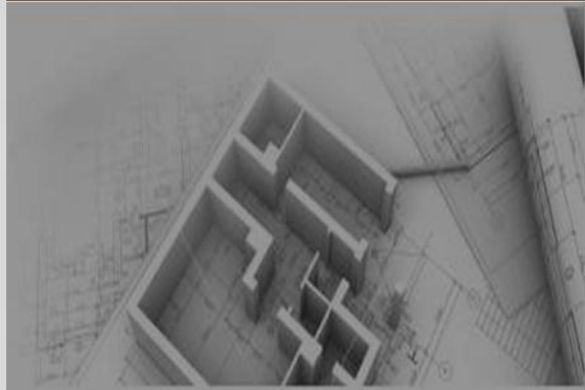
건설관련법규이해부족



공기지연 및 공사비증가



설계도서 단순이해



USER 의사결정지연

II. Core Strategy

Realization of optimum function as the core facilities



Process Management through
utilization of 3D Modeling

II. Core Strategy

Realization of optimum function as the core facilities



Realization of optimum function as project management

감사합니다

T h a n k y o u