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IDAL INNOVATION CLUSTER

Financial feasibility for an innovation cluster development in Beirut

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1. Site overview

Plot 705 is located strategically in the heart of Beirut and its close to the main economic facilities.



Figure 1. Plot 705 strategic location in Beirut

- Distance to Beirut airport: 9 Km
- Time needed: 15min
- Distance to Port of Beirut : 5 Km
- Time needed : 10min
- Distance to Port of Tripoli : 84 Km
- Time needed : 1h 30min

The plot is surrounded by the best in class hotels, universities, medical centers and banks.



Figure 2. Plot strategic location top view (1)



It is also surrounded by recreational facilities including sport clubs and restaurants.

Figure 3. Plot strategic location top view (2)

01 Dalfa Bay
02 Al Nahda tennis court
03 Sporting Club
04 La maison Rose
05 Riviera hotel

The plot covers an approximate area of 52,000 m2 and has a special urban regulation.



Figure 4. The plot area top view

- The current urban regulations covering the area allow for a coefficient of occupation of 40% and a coefficient of exploitation of 2.5
- Allowable building height is from +157m (North) to +151m (South)
- The site also benefits from the provisions of law no. 402/95 regarding the coefficients of occupation and exploitation

Parcel Area	Plot Number	Area Land Deeds
Original Parcel	705	51,982 m2
Area Taken by Decree 2673 18/02/1972	705/E	-105 m2
Rest Area	51,877 m2	

Law 402			
Footprint	40%	X 2	max60%
Net floor area	2.5	X 2	5
Balconies	+20%		

The land has a flat topography which makes it a perfect place for construction.



Figure 5. Land topography top view

Topography	Apart from the south-eastern corner, which steeply rises 25 meters to meet Bliss Street and California Street, most of the site is generally flat The Avenue de Paris slopes down from around +10 m at the Manara street intersection to reach +5.5 m at the tip of the site and slopes gently to +5 m at the Abbé Lepré Street
Soil Type	The site sub-structure is composed of a layer of sand, varying in thickness from +3 to 5.5 meters, overlaying the main rock layer, a fractured but hard limestone formation
Vegetation	Very little vegetation can be found, with only ground level shrubs in some parts of the site
Water table	The water table beneath the surface is very close to the sea level, around 10 meters deep from natural ground level

Surrounded by roads, the plot is accessible easily by all the sides.



Figure 6. Plot accessibility top view

- Lot 705 is bordered on all sides by roads, except for a 50-meter strip to the east, where it adjoins a neighboring parcel and the 100-m long disconnection from the corniche due to Dalfa bay commercial center
- Located at the center of the corniche, the access to the site and exits of the lot are critical due to saturated traffic conditions
- Moreover, access from the upper eastern street 25m above is also technically challenging

The land has a good visibility angle and is blocked only on one side by DALFA bay project.





Tower 1 Visibility

Tower 2 Visibility

Figure 7. The land visibility angle top view

- With a visibility angle of 180 degrees from North to South-West, the site covers a large sight line of the sea
- However, the visibility is blocked by DALFA bay project along a 100m strip at the northern part of the site (almost 20% of the total projected length of lot 705) and up to 30-meter height

A SWOT analysis is conducted to determine the plot location strengths, weaknesses, opportunities and threats.

Strengths:

- Proximity to Beirut airport and port of Beirut
- Proximity to top universities, hotels, medical centers, banks and recreational spaces
- The land size and the favorable urban regulations
- The land's flat topography
- The land's high visibility to the sea

Weaknesses:

• The high land price which makes its rent expensive

Opportunities:

- The land could be invested to generate revenues to the government
- Due to its big area the land could contain a green space which is needed in this location in Beirut

Threats:

• The various legal disputes between the government and the current parties that occupy a part of the land under legal contracts (the sporting club, Annahda sports club)

2. Concept Design

A modern architecture will be developed for the project which will make it an attractive destination for top companies.



Figure 8. Project architecture

- The project will have a modern and creative architecture which makes it very attractive for tenants
- The cluster will be well-planned and will comprise a big green area which is missing especially in this zone in Beirut
- The construction area will be well distributed across the land which limits the unexploited area
- An underground parking will be available for the project's tenants, which will eliminate the parking's problems in Beirut

The project will be divided into two phases containing different components.

Phase 1: 109,707 sqm

Components	Area (sqm)	Number
Offices	26,600	1,330
Meeting rooms	7,000	140
Conference rooms	1,600	2
Financial institutions	4,500	15
R&D labs	600	2
Studios	300	2
Retail	7,500	50
Gym	1,500	3
Cafeteria	2,400	8
Administration	1,000	1
Gov. center	500	1
One stop shop	200	1
Medical center	200	1
Parking	51,357	1
Green area	1,250	1
Power station	500	1
Circulation area	2,700	1

Phase 2: 56,600 sqm

Components	Area (sqm)	Number
Offices	26,600	1,330
Meeting rooms	7,000	140
Conference rooms	1,600	2
R&D labs	600	2
Retail	15,000	50
Cafeterias	2,100	8
Circulation area	3,700	1

One tower will be built at each phase and will include offices and meeting rooms.



Figure 9. Towers architectural drawing

Offices:

- 1. Rental price: 250 USD/sqm/year
- 2. The offices will be furnished with modern chairs, desks and couches
- 3. The offices will be provided a wide variety of services including:
 - Electricity (including private generation)
 - Water
 - High speed internet through a fiber optic network
 - Maintenance services
 - IT services
 - Cleaning services

Meeting Rooms:

- 1. Furnished meeting rooms will be offered for free for the office tenants in order to arrange meetings
- 2. The meeting rooms will be equipped with tables, chairs and TVs that could be used for presentations

The project will also include a wide variety of commercial spaces.



Figure 10. Project commercial spaces floor view

Commercial spaces such as retail stores, financial institutions, banks and cafeterias will be rented to potential tenants. In addition, the commercial spaces will have special entrances separated from the towers ones to make them accessible by customers other than the project's tenants.

Retail stores:

- 1. Rental price: 1,500 USD/sqm/year
- 2. The retail stores are provided with a long list of free services encompassing electricity (including generators), water, maintenance, IT services and cleaning services

Financial institutions:

- 1. Rental price: 1,500 USD/sqm/year
- 2. The financial institutions will be provided electricity (including generators), water, maintenance, IT services, cleaning services

Conference rooms:

- 1. Rental price: 1,500 USD/day
- 2. The conference rooms fit for 600 persons and are equipped with modern audio and visual systems

Gyms:

- 1. Rental price: 1,500 USD/sqm/year
- 2. The gyms are provided with free electricity (including generators), free water, free maintenance and cleaning services

Cafeterias:

- 1. Rental price: 1,500 USD/sqm/year
- 2. The cafeterias are offered free electricity (government and generators), free water, free maintenance and cleaning services

Administration:

Administration office is responsible of the administrative requests of the project's tenants.

R&D labs:

The project's tenants will have free access to R&D labs so they can develop new products.

Studios:

The project's tenants (especially AdTech, eLearning and media streaming) will benefit from modern studios containing developed audio and video systems.

Medical center:

A medical center will be available in order to act if any accident occurs during the working time.

One stop shop:

The one stop shop will provide many services encompassing fast-track company registration, licensing, and follow up at MoF, municipality, social security and payment utility bills (EDL, Ogero and more).

Parking:

A free of charge parking will be provided for each of the project's employees and visitors.

3. Project financials

3.1. Financial assumptions & revenues

Rent and business services will constitute the project's sources of revenues.

- 1. Rent revenues: generated from offices, retail stores, financial institutions, gyms, cafeterias, and conference rooms rental payments
- 2. Business services revenues: generated from HR, auditing, legal, and consulting services fees

Moreover, different project components will be rented at different rates and will have various occupancy in the base case scenario.

- Offices rent = 250 USD/sqm
- Retail rent = 1,500 USD/sqm
- Financial institutions rent = 1,500 USD/sqm
- Gyms rent = 1,500 USD/sqm, 100% occupancy is assumed
- Cafeterias rent = 1,500 USD/sqm
- Conference rooms rent = 1,500 USD/sqm, 12 days/month occupancy is assumed

Table 1. Occupancy rates (1)

Occupancy	Y1	Y2	Y3	Y4	Y5	Y6	¥7	Y8	Y9	Y10
Offices	0	0	0	20%	25%	30%	35%	40%	45%	26%
Financial. Inst	0	0	0	33%	47%	60%	73%	87%	100%	100%
Retail	0	0	0	50%	60%	70%	80%	90%	100%	38%
Cafeterias	0	0	0	50%	63%	75%	88%	100%	100%	67%

Table 2. Occupancy rates (2)	Table 2.	Occupancy	rates ((2)
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Occupancy	Y11	Y12	Y13	Y14	Y15	Y16	Y17	Y18	Y19	Y20
Offices	30%	33%	37%	40%	44%	47%	51%	54%	58%	61%
Financial. Inst	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Retail	43%	47%	52%	57%	61%	66%	71%	75%	80%	85%
Cafeterias	73%	80%	87%	93%	100%	100%	100%	100%	100%	100%

Table 3. Occupancy rates (3)

Occupancy	Y21	Y22	Y23	Y24	Y25	Y26	Y27	Y28	Y29	Y30
Offices	65%	68%	72%	75%	79%	82%	86%	89%	90%	90%
Financial. Inst	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Retail	89%	94%	95%	95%	95%	95%	95%	95%	95%	95%
Cafeterias	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

In addition, business services fees will vary with the tenant's maturity.

- 1. HR fees:
 - Startups: 500 USD/month
 - SMEs: 1,000 USD/year
 - Mature corporations: 4,000 USD/year
- 2. Legal fees:
 - Startups: 3,000 USD/month
 - SMEs: 4,000 USD/year
 - Mature corporations: 6,000 USD/year
- 3. Auditing fees:
 - Startups: 850 USD/month
 - SMEs: 1,200 USD/year
 - Mature corporations: 4,000 USD/year
- 4. Consulting fees:
 - 35,000 USD per project

The project revenues are expected to grow at 9% CAGR to reach USD 133 million in the 30th year.



Project Revenues (USD Million)

Figure 11. Project revenues

3.2. Costs

The project will demand a long list of costs divided into capital and operational expenditures.



The land rent that should be paid to the government will vary across the years in order to support the investors during the first years of investment.

The land rent will be estimated as a percentage of the land cost as per the table below.

Table 4. Land rent as a percentage	e of t	he land	cost	(1)
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Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
0%	0%	0%	1%	1%	1%	2%	2%	2%	3%

Table 5. Land rent as a percentage of the land cost (2)

Y11	Y12	Y13	Y14	Y15	Y16	Y17	Y18	Y19	Y20
3%	3%	3%	3%	3%	3%	3%	3%	3%	3%

Table 6. Land rent as a percentage of the land cost (3)

Y21	Y22	Y23	Y24	Y25	Y26	Y27	Y28	Y29	Y30
3%	3%	3%	3%	3%	3%	3%	3%	3%	3%

Consequently, the government will receive the following rental income (USD Million).

Table 7. Government rental income (1)

Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
0	0	0	7.8	7.8	7.8	15.6	15.6	15.6	23.4

Table 8. Government rental income (2)

Y11	Y12	Y13	Y14	Y15	Y16	Y17	Y18	Y19	Y20
23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4

Table 9. Government rental income (3)

Y21	Y22	Y23	Y24	Y25	Y26	Y27	Y28	Y29	Y30
23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4

Moreover, the project will demand high capital expenditures in the construction phase and high operational expenditures in the operating years.





Figure 12. Project costs evolution

Land rent, salaries and electricity costs will constitute the biggest portion of the operational expenditures.



Operational Expenditures Breakdown

Figure 13. Operational expenditures breakdown

Others include internet, water, maintenance, marketing and office supplies expenses.

3.3. Financial indicators

The project's EBIDTA is expected to reach USD 946 Million in the 30th year.





Figure 14. EBIDTA

The project's net earnings are expected to reach USD 74 Million in the 30th year.



Net Earnings (USD Million)

Figure 15. Net earnings

The project will breakeven at the 17th year and will generate USD 76 Million net cash in the 30th year.



Net Cash (USD Million)

In order to reach the highest possible IRR, the second phase construction should be initiated at year 7.



Project IRR Evaluation as a Function of the Second Phase Construction Year

Phase I construction

4. Socio-economic assessment

Six major social and economic impacts will be leveraged by the innovation cluster.

Economic Impacts:

- A. Trade deficit decrease: the cluster will help boost Lebanese technology exports
- B. Income tax increase: jobs created will increase the income tax
- C. Land rent: land rent generated by the cluster

Social Impacts:

- D. Unemployment rate decrease: the cluster will create additional jobs (both direct & indirect) leading to a decrease in unemployment rate
- E. Emigration rate decrease: the hub will attract both highly educated talents and skilled labors, thus the migration rate will decrease
- F. Encouraging entrepreneurial culture: the cluster will promote the entrepreneurial and creative culture among the Lebanese Youth

A. Trade deficit decrease

The cluster will decrease the Lebanese trade deficit by boosting technology exports form USD 32M to USD 68M.

Year of Operation	Occupancy (# of Companies)	Technology Exports (\$ M)
Y4	20	4.0
Y10	52	10.4
Y20	123	24.6
Y30	180	36.0

Cluster's Occupancy & Technology Exports

Figure 18. Cluster's occupancy & technology exports

Additional Technology Exports Generated by the Cluster's Companies



Figure 19. Additional technology exports

B. Income tax increase

The income tax will increase proportionally to the number of jobs created.

Income tax = Jobs created x Average salary x Tax rate



Growth in Income Tax & Number of Jobs Created

Figure 20. Growth in income tax & number of jobs created

C. Land rent

The land rent will increase gradually from Y4 to Y10, then it will remain constant for the remaining 20 years.



Land Rent Paid to the Gpvernment (USD Million)

Figure 21. Land rent paid to the government

- The land rent form Y1 to Y3 (construction/ pre-operation phase) is \$0
- From Y4 to Y6 (second 3 years of operation) the project developer will pay an additional \$7.8M for rent, i.e. twice the initial value
- At Y10 the land rent will increase by another \$7.8M, and it will remain constant (\$23.4M) until Y30
- Land rent will increase at a CAGR of 4.3% from Y4 to Y30

D. Unemployment rate decrease

E. Emigration rate decrease

The techpark project will decrease Lebanon's rate of emigration by creating thousands of job opportunities.

- The innovation cluster will create 1,489 jobs in 2023 versus 10,448 in 2049
- 60% of the employees will stay in Lebanon instead of emigrating to foreign countries (GCC countries, European countries and etc.). Therefore, 893 employees/ talents will be retained in Lebanon in 2023 versus 6,269 in 2049
- Number of jobs created by the cluster will increase at a 7.8% CAGR from 2023 to 2049
- To synthesize, the hub will decrease both the unemployment and migration rates

Number of Created Jobs & Retained Talents (Y4 & Y30)



Figure 22. Number of created jobs & retained talents

F. Encouraging entrepreneurial culture

Tech- Hub positioning at the core of the social innovation diagram portrays its crucial role in fostering social entrepreneurship.



Figure 23. Social innovation levels & dynamics