# DECISION-MAKING TOOL FOR A CONSTRUCTIVE RELATION BETWEEN EMBLEMATIC FACILITIES AND URBAN REGENERATION PROJECTS APPLIED TO THE CASE OF RIAD EL FETH ARTS CENTRE IN ALGIERS

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Abstract: Considered as a lever for urban regeneration politics, the construction of emblematic facilities is also a way to enhance metropolitan attractiveness. The Algerian capital is no exception to this rule. These new urban icons are designed to be the catalysts of urban change, and are expected to improve the adaptation of metropolitan localities to new needs and developmental challenges. However, in the field, this iconic regeneration does not always bring the expected changes. The Riad El Feth Arts Centre, an iconic facility located in the central municipality of El Madania in Algiers, is one example. In this paper we propose an operational tool called EFLUR (Emblematic Facilities Leverage of Urban Regeneration), intended to facilitate urban decision-making by evaluating the leverage of emblematic facilities at targets of urban strategy. It helps to assesses and optimise their leverage capacity by identifying their failures and opportunities, with a view to undertaking necessary actions, both to amplify positive contamination and to limit detrimental effects. The Riad El Feth is selected as a study case to validate our approach and test the operationality of EFLUR. Beyond conventional impact studies, the value of this tool lies in its holistic approach and capacity to combine metropolitan objectives with local development strategies.

Key words: emblematic facilities, urban regeneration, operational tool, leverage effect, Algiers (Algeria)

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## Introduction

The multitude of guidelines and objectives linked to various urban planning instruments and development tools highlight the desire of the city of Algiers to consolidate its position within one of the networks of the world's economy, namely the Mediterranean. Urban regeneration (UR) projects and the creation of emblematic facilities (EF) are an integral part of the process (PDAU: plan directeur d'aménagement et d'urbanisme 2011). Consequently, many EF have sprung up in the Algerian landscape: the new El Djazair mosque, the Baraki sports complex, the



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Opera of Algiers, the Algiers' aquarium, etc., all aim to contribute to restructuring the city's identity and increasing the number of landmarks (Abdelkader 2014).

However, while the construction of EF seems to be seen by urban space managers as a catalyst for change and the modernisation of the Algerian capital (Kebir 2012), no work has been carried out to verify whether these buildings actually do support the expected changes. The extensive (financial, human and natural) resources needed for the construction of such projects motivated this research. This paper proposes a tool to measure the leverage of an EF on UR, which we call EFLUR. It is designed to be used by urban planners, and the aim is to amplify the 'positive contamination' of EF effects on UR (Robin 2012), which is one way to improve the articulation of different objectives at various urban scales with respect to emblematic projects (Djament-Tran, Guinand 2014). The impact studies provided by the regulatory texts are limited to assessing the environmental impacts of projects. The evaluation reports on the changes induced by the facilities in their territory, and not in relation to the changes hoped for this territory, in particular as part of an urban regeneration strategy.

The Riad El Feth Arts Centre (Fig. 1) located in the hills overlooking Algiers was opened in 1986 by the second Algerian president Chadli Ben Djedid. It was one of the first post-independence EFs, established by a government keen to enhance the prestige of the city (Nassima 2002). The Centre is located in the municipality of El Madania, in downtown Algiers. This study applies the EFLUR tool to the Riad El Feth in order to confirm (or disprove) its role as a lever in the economic, social, spatial and environmental re-urbanisation of El Madania (Berezowska-Azzag et al. 2015). The investigation seeks to identify the relationship between the urban icon and its host neighbourhood, which must respond to both the challenges of modern economic development (notably, the eradication of social inequalities) and the preservation of resources (Kennedy 2015).

Fig. 1. The patio of the Riad El Feth Arts Centre.

## The emblematic facility, an option to regenerate urban areas

An EF indicates a symbolic and structuring architectural production made exceptional by its design, function or history. It reflects an attempt to create or confirm an urban centrality (Chasseriau 2004; Lusso 2014). The term 'emblematic' emphasises both the urban and socio-cultural roles attributed to such facilities. It refers to the clear link between the desire to assert power (political, religious and economic) and create a distinct identity or representation. Through its symbolism, functional rarity and/or exceptional morphology, the EF becomes symbolic both in its own city and sometimes even beyond. Its image, a demonstration of excellence, is often accompanied by a slogan or media messages that illustrate, translate and clarify its meaning (Biau 2011).

Through their ability to shape the urban landscape, enhance the image of a region, confirm its identity, and attract new residents and investments, EFs can become genuine hubs of activity (Carrière 2002). Examples of EF leverage include improving the attractiveness of a locality; creating jobs and promoting investment; boosting economic growth by encouraging private investment; restoring the pride of residents in their municipality, and promoting population diversity and activities (Boelsums 2012).

Conversely, the attractiveness of facilities (tourist, economic, residential, cultural) is influenced directly or indirectly by the performance of its urban context. If Gehry's masterpiece in Bilbao is an architectural icon that makes the residents of Abandoibara proud, extending its influence required many other actions, including providing more tourist accommodation (Masboungi 2008).

## Relations between the EF and UR

Kebir, an economist, states that an object, regardless of its nature (petrol, forests, expertise, art, or industrial wasteland), becomes a resource when it is linked to the production system. She explains that the relation between the object and the production system is established as soon as an intention of production is projected onto the object (knowledge, expertise, mining, building, etc.). An entity in itself (a castle is a castle), the object becomes a resource (Kebir 2006: 703). Kebir defines four types of dynamics that link the object and the production system: growth (D1), erosion (D2), shortage (D3) and development (D4) (Fig. 2).

This approach seems appropriate for our research topic. It makes it possible to visualise the dynamics that can develop between an EF and its urban environment, assimilated with respect to the object (resource) and the production system.

A tool to define the relationship between an emblematic facility and local urban regeneration

The scientific literature offers a variety of examples of processes, approaches and tools used in the evaluation of urban and architectural projects: (a) an absolute method concerning the evaluation of an emblematic value (Ethier 2013); (b) a reading grid for project analysis like the $RST_{02}$ grid proposed by CERTU: centre d'études sur les réseaux, les transports, l'urbanisme et les constructions publiques (2006); (c) a goals-achievement matrix (Leduc Gaétan, Raymond 2000; Villeneuve et al. 2009); (d) impact matrices (Cherqui 2005), and others. They relate to the effects of an EF independently of future local development objectives, a position that does not support the complexity of the relationship between the two (EF, UR), and does not meet the purpose of this assessent. The EFLUR is designed for actors responsible for local management and urban planning. It is intended to foster positive contamination between the object (EF) and the system (UR) that promotes a voluntary dynamic of development.

## Methodology

We opted for a systematic, holistic approach to propose a tool. It was chosen to help us to understand the complexity of the notion of UR, and to distinguish direct and indirect effects engendered by EFs. If the UR objectives vary from one situation to another as a function of local priorities, this holistic and transverse model appears objectively to be transposable. For this reason, the tool takes a general approach based on global indicators, and the evaluation prioritises strategic objectives consistent with the adopted UR project.

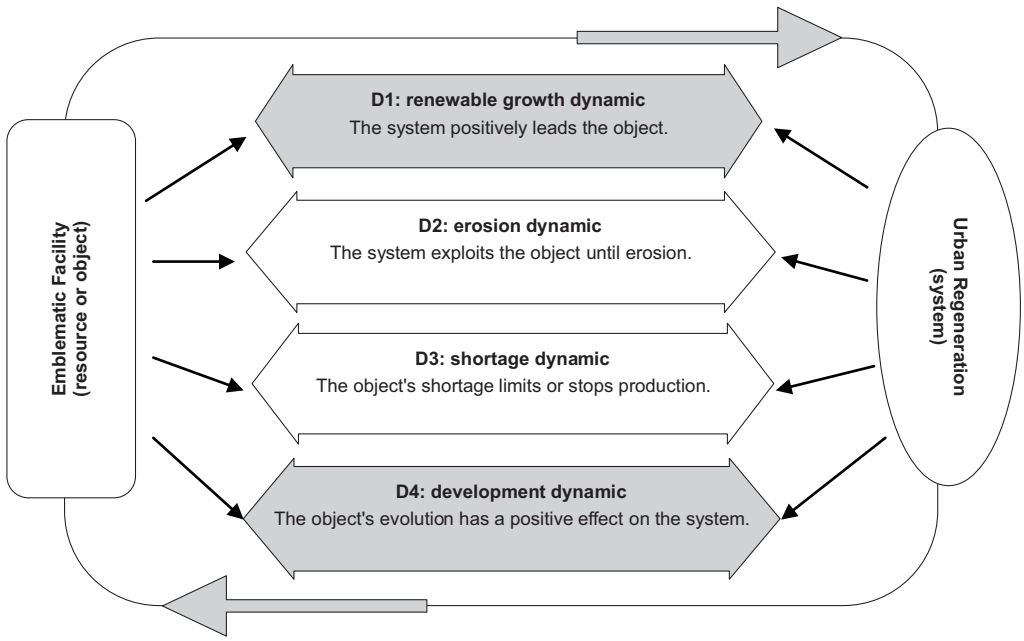


Fig. 2. Potential dynamics between an object (EF) and the production (urban) system.

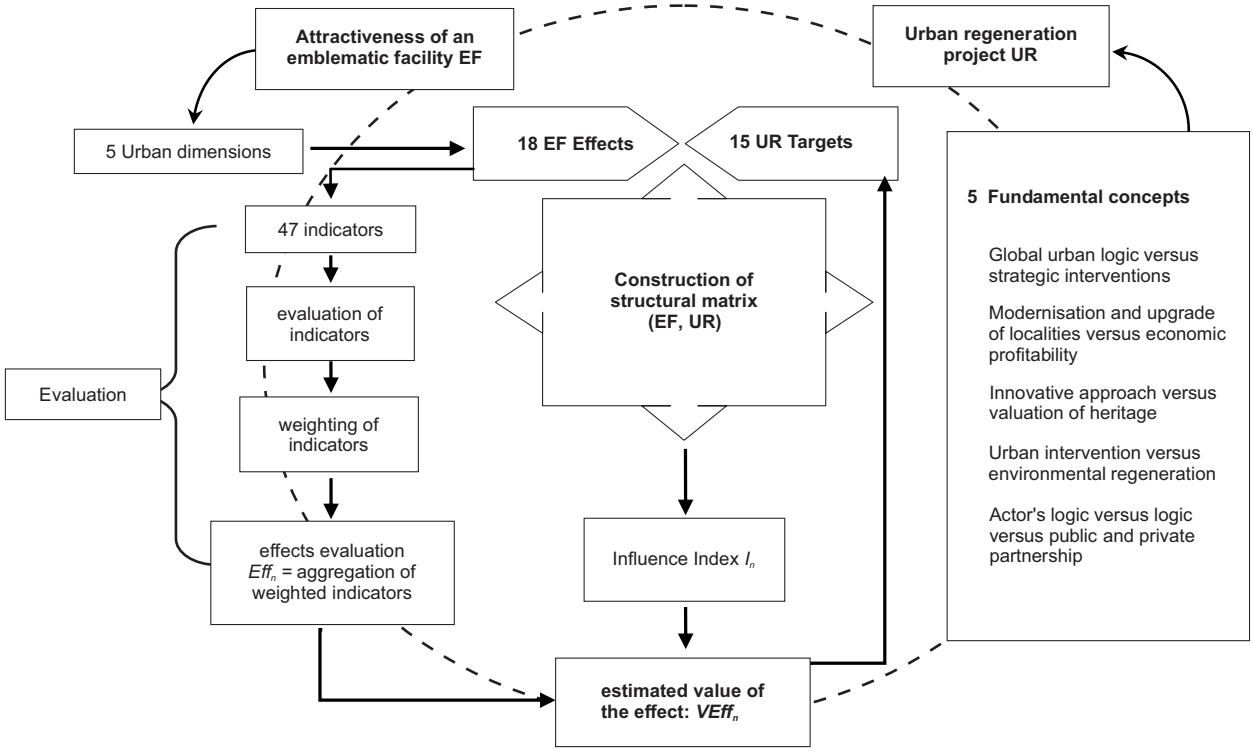


Fig. 3. Construction of the EFLUR tool.

Table 1. Components of the structural matrix.

| Urban regeneration targets | Checklist of emblematic facility effects (Eff) |
|---|---|
| 1. Integration of municipality development into the metropolitan renewal project.<br>2. Enhancement of local attractiveness for better visibility of the city.<br>3. Close proximity.<br>4. Permeability of the locality and strengthening of links with the city.<br>5. Repositioning of the locality in the system of territories creating economic values.<br>6. Locality specialisation.<br>7. Adapting urban planning to the new needs of the modern economy.<br>8. Enhancing heritage and recycling of existing buildings.<br>9. Enhancing cultural diversity.<br>10. Conserving natural resources and reducing nuisances.<br>11. Improving safety and risk management.<br>12. Cleanup of the degraded territories.<br>13. Setting up a local tool the RU strategy at the various phases.<br>14. Creation of establishment to federate all the actors around the RU project.<br>15. Reconsidering approaches and knowledge for more effective territorial management and greater flexibility. | 1. Creation of a new pole of attractiveness.<br>2. Training of a new urban landscape.<br>3. Development of proximity.<br>4. Appearance of new nuisances.<br>5. New Urban icon.<br>6. New Model of partnership governance.<br>7. Training of an urban intruder.<br>8. Promotion of diversity.<br>9. Strengthening safety.<br>10. Promotion of residential attractiveness.<br>11. Initiated gentrification phenomenon.<br>12. Increase in economic value.<br>13. Revitalisation of the land and real estate market.<br>14. Promotion of tourist attractiveness.<br>15. Contribution to the territory specialisation.<br>16. Green transport.<br>17. Preservation of resources.<br>18. Creation or increase of nuisances. |

Source: own study based on the examples of benchmarking.

The tool is constructed in three major stages, briefly described below:

Based on the research work of Béatrice Sokoloff (2002), we selected five concepts that illustrate the fundamental objectives of UR (Fig. 3). Then we opted for an integrated analytical method which seeks to determine objectives, actions and positive results and leads to the identification of three targets for each UR concept. The various projects of urban regeneration that have a good feedback located in different towns in the world have been chosen to apply this analytical method. We then get a list of 15 targets.

The SWOT[1] analysis method was applied to samples of EFs in different metropolises and cities of the world, selected using pre-established criteria (high profile, similar urban context, diversity, data availability) (Bouallag-Azoui 2018), for example: Guggenheim, Bilbao, Villette Parc, Paris, Bull-Ring, Birmingham, or the Acropolis museum, Athens. This resulted in the identification of direct and indirect, positive and negative effects (Eff) of the attractiveness of an EF on its immediate urban environment. The consolidated results were used to draw up a checklist of 18 representative effects corresponding to various urban dimensions: social, economic, environmental (built and natural), and visual identity. Each effect was associated with a limited number (two to four) of informative indicators that formed the basis of an assessment of its importance.

Ultimately, a structural matrix was constructed that made it possible to compare the effects of the EF with UR targets (Table 1), with the aim of estimating the contribution (or not) of the EF to the UR strategy.

## The method to evaluate leverage

Leverage was estimated in two steps. One was a comparison of the 18 *Effs* with the 15 UR targets identifying a system of relations (positive or negative) represented by an Influence index $I_n$ attributed to each effect $Eff_n$.This index illustrates the importance of $Eff_n$ with respect to the overall set of effects, representing the dynamics between the EF and UR.

$$I_n = (NbR_n / NbR_{max} + NbR_n / NbR_{min})/2$$

where:
- $NbR_n$ – the absolute number of relations established by the effect ($n$) and the UR targets;
- $NbR_{max}$ – the absolute maximum number of relationships recorded between the effect of the EF and UR targets, UR; and
- $NbR_{min}$ – the absolute minimum number of relationships recorded between the effect of the EF and UR targets, UR; and $NbR_{min} \neq 0$.

The 18 *Effs* were estimated from 46 (qualitative or quantitative) indicators whose values were converted into an arithmetic scale using a quantitative marking scheme. A weighted system, based on the procedure of the usual successive comparisons in multi-criteria approaches (Carluer 2005), was used. The procedure is to reveal the relative influence that experts assign to each of the effects and which is translated as a percentage, knowing that the sum of weights or influences is equal to 100%, for each effect assessed. The questionnaire was distributed among 30 experts in the field of urban planning: teachers-researchers (43%) and practitioners (57%).

$$Eff_n = \sum (Ind_n * P_n)$$

where:
- $Eff_n$ = the arithmetic value of effect *n;*
- $Id_n$ = the arithmetic value of indicator *n;*
- $P_n$ = the weighting of indicator *n.*

The value ($VEff_n$) of $Eff_n$ was estimated from aggregated indicator scores multiplied by the influence index $I_n$. This value represents the leverage effect of the EF on UR targets.

$$VEff_n = Eff_n * I_n$$

## Application to the art centre of Algiers, Riad El Feth. The case study

Built in 1986, Riad El Feth is one of a series of landmarks that punctuate one of the highest ridges in the region, which forms a magnificent panoramic balcony over the Bay of Algiers. Designed in the spirit of the Casbah building (Fig. 3), Riad

[1] The SWOT (Strengths, Weaknesses, Opportunities and Threats) technique is a combinatorial strategic analysis method that can identify the characteristics of its subject and consider options for its development.

El Feth is organised around a patio that extends over three levels. It includes a 90-seat conference hall, a 495-seat cinema with three projection rooms, a small theatre, and 127 business premises (of which only a few are occupied). The building sits on a 1500 m² esplanade, where crowds gather for large-scale cultural events. The Centre is managed by a public body that employs 367 people: the Office of the Riad El Feth OREF falls under the responsibility of the Ministry of Culture. In 2014, the number of visitors was estimated at 235,204 (OREF 2014), more than 600 per day.

The facility is located in El Madania (Fig. 4), an area overlooking Algiers about 6 km south-east of the city centre. El Madania, together with the municipalities of Central Alger, M'Hamed and El Mouradia, form the central district of Sidi M'Hamed. However, El Madania is distinguished by its relative poverty: "What can be done with a 17-billion centime budget? More than 80% of this is used to pay the wages of APC civil servants. Moreover, I don't know how we are going to cope with the new increases" (an interview with the Mayor of El Madania, El Watan, of 20 April 2013).


Fig. 4. Location of Riad El Feth.

Table 2. Economic and social indicators comparing El Madania to other Sidi M'Hamed municipalities.

| Municipality | Area (ha) | Population | Population density | Wealth ratio | Commercial activity rate | % of small apartments | Occupancy |
|---|---|---|---|---|---|---|---|
| Alger-Centre | 370 | 75,541 | 9.78 | 22,310 | 4.66 | 32.4 | 1.8 |
| Sidi M'hamed | 218 | 67,873 | 16.50 | 8,610 | 3.15 | 39.4 | 2.1 |
| El Mouradia | 190 | 22,813 | 5.58 | 12,107 | 1.00 | 36.7 | 2.0 |
| El Madania | 217 | 40,301 | 5.91 | 3,076 | 1.06 | 60.0 | 2.8 |
| Algiers average | | | | 12,604.37 | 1.75 | 34.6 | 2.1 |

Source: own study based on Statistics of ONS (2008).

The area is mainly residential (7,949 houses with a surface area of 217 ha (ONS 2008)) and is made up of several large housing estates dating from the end of the colonial period (Diar El Mahçoul and Diar Essaada designed by the architect Fernand Pouillon, Diar El Chemes, Diar El Bahia and Diar Essalem), characterised by overcrowding and poor facilities (notably sanitary installations). These conditions (Table 2) have been reflected in very violent urban riots.

## Application of the EFLUR tool to Riad El Feth/ El Madania

Given the lack of an UR project or a local development strategy for El Madania, we drew upon conclusions taken from a pre-diagnosis and PDAU recommendations in order to compare and assess pre-defined UR targets against local challenges. Residents were involved by sending them a questionnaire that asked them to identify their needs and expectations regarding their municipality. The questionnaire was distributed to a sample of 70 people representative of the local social component. In balanced proportions, it concerned the two sexes (men, women), the different ages (children, young people, adults, the elderly) and the different profiles (women at home, students, unemployed, retirees, employees). Training (40%), jobs (33%), and sport and leisure (13.3%) were the first three needs listed.

Table 3. Rating scale.

| Score | Qualitative assessment |
|---|---|
| 0–0.5 | insignificant |
| 0.5–1.5 | not very important |
| 1.5–2.5 | important reference value = 1.5 |
| 2.5–3.5 | very important |

Source: own study.
The average of this scale is 1.5. The reference value is designed so that we can equate it with the desired values.

At the same time, a rating scale (Table 3) was established to estimate the effects $Eff_n$ (negative or positive) of the Arts Centre. Performance was evaluated from effectiveness scores given to indicators. The scores were assessed with respect to the needs that emerged from the pre-diagnosis, and the results of a study that classified municipalities according to their level of performance[2] (Berezowska-Azzag et al. 2015). These results represented the economic, environmental and quality-of-life aspects. These profiles show the most vulnerable targets of UR, namely those related to 'Repositioning the district in the urban system at economic value' and 'Adapting the urban environment to the new needs of the modern economy'. The indicators were weighted on the basis of the results of a questionnaire sent to the Planning Department and urban planning experts.

The analysis was conducted using Excel software. This led to the development of a grid to assess effects (Table 4). The results are also presented in a radar diagram (Fig. 4), which shows that of the 18 *Effs*, four (including one negative effect) are *Insignificant*, while 11 (two of them negative) are *Not very important*.

The radar diagram (Fig. 5) highlights three *Important* or *Very important* effects, which correspond to the promotion of diversity ($Eff_8$), the development of proximity ($Eff_3$), and strengthening security ($Eff_9$). The open architecture of the Riad El Feth, the creation of new infrastructure (a mechanical bridge and a cable car), and the visible presence of security services are the origin of improvements in these areas.

[2] Taking an ecosystem approach, the study was based on a scoreboard with three indices (environmental, economic and quality of life); each index was expanded into categories and indicators that give a fairly comprehensive outline of a municipality and its level of development.

Table 4. Evaluation of *Eff* (an example).

| $Eff_9$ | Indicators | Score | Weighting % | *Eff* value | Influence Index $I_n$ | Leverage effect $VEff_n/3.5$ |
|---|---|---|---|---|---|---|
| strengthening safety and security | improving safety in public spaces | 1.5 | 50 | 1.50 | 1.74 | 2.61 |
| | reducing vulnerability by the creation of new spaces | 2.5 | 25 | | | |
| | creation of new urban security services | 0.5 | 25 | | | |

Source: own research.

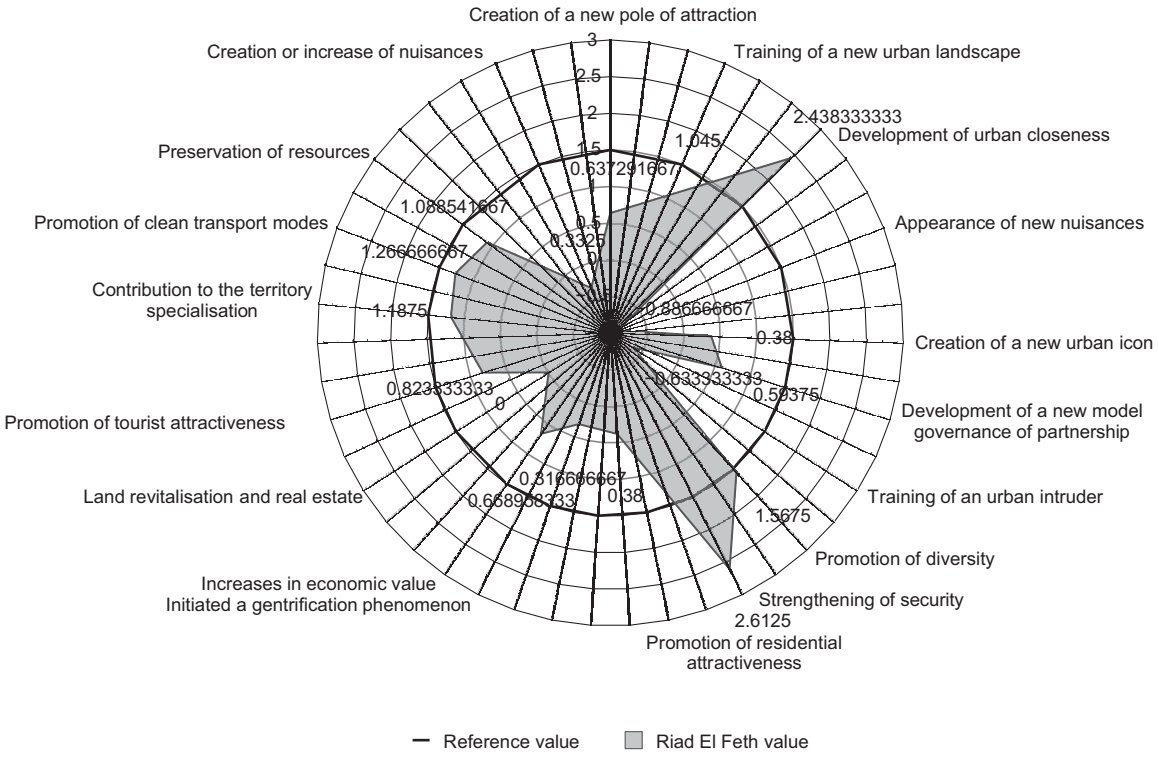


Fig. 5. Effects of the Riad El Feth Arts Centre on UR targets.

## Results and discussion

### A dynamic of shortage links the Riad El Feth to El Madania

The results provided by the EFLUR tool shed light on the dynamics between the effects of the EF and UR targets. Most (15 of the 18) *Effs* scored below the reference value (the average of the rating scale being 1.5), which sets the threshold for deciding whether the effect is important, in the sense that it has a real impact on achieving (or not) UR targets. The preponderance of *Insignificant* or *Not very important* effects, suggests that the Arts Centre has had a marginal role in the development of the El Madania municipality.

The evaluation placed the Arts Centre in position D3 in the graph of the dynamics between an EF and UR (Fig. 2). This corresponds to a dynamic of shortage in which the object does not drive development. The tool verified that in its current state, the Riad El Feth cannot be considered a lever for the regeneration of El Madania. It has not been able to attract and/or maintain the hoped-for socio-economic added value. Further evidence is found in the worsening unemployment rate in the municipality, estimated at 6% in 1988 (ONS: office national des statistiques 2008) and above 10% in 2012 (ONS 2014). It is revealing to note that only a few residents have been employed by the Centre or its administration – 68 people, representing 18% of the total estimated workforce in 2014 (OREF 2014).

According to Kebir (2006), in position D3, the weaknesses of an object and its effects can become so significant that it can limit or stop production in the system. The author also argues that if the situation persists, it can lead to the dilution of the object through the degradation or gradual destruction of the system. Such a situation would jeopardise the status of the Riad El Feth as an EF, leading to the municipality losing a potential generator of urban dynamics (Bouallag-Azoui, Berezowska-Azzag 2016).

However, the evaluation demonstrated that the situation is not yet critical. Despite the lack of a positive *Eff*, the scores indicate a certain level of leverage on some UR targets and suggest that Riad El Feth has some potential to become a catalyst for regeneration (Ismain 2010). Furthermore, the negative effects are not so significant as to represent a brake on local regeneration dynamics.

## Operational translation: positive contamination

The results of the EFLUR evaluation can be represented by a positive contamination graph (Fig. 6) that shows the estimated leverage of an EF on local UR. This graph shows actual scores compared with the desired values that we equate in this evaluation with the reference value of 1.5, in order to draw up action plans and identify the necessary resources. The aim is to shape the graph in ways that support sustainable regeneration.

Stakeholders (planners, OREF, local decision-makers and representatives of civil society) can plan short-term actions by drawing upon the potential of an EF and the municipality, and identifying the priorities and stakes in local development (Table 2). The objective is to improve indicators to the point that their effects become *Important* or *Very important*, meaning that they are UR levers.

The retroactive nature (Morin 1974) of the EF/ UR dynamics suggests that an intervention is necessary in the urban system. Specifically, it is necessary to promote the attractiveness of the EF and enhance its leverage on local development. This requires short-term actions with respect to some (or all) urban dimensions (social, economic, spatial and environmental) based on complementary operations or initiatives that have been proven to have direct impacts on the EF. The aim is to enhance polarisation effects (for example, rehabilitate the built environment, develop new partnerships, encourage business, provide training to young people). It should not be overlooked that in a society based on communication, an image has a special role in the identification of districts and cities, with all that this implies in terms of attractiveness and quality of life for residents (Hedley 1994).

## Development dynamics: a condition for the EF leverage of UR

Paul Boino (2005) states that large-scale projects have the ability to transform the urban landscape, improve its image, and attract new residents and investments. In this way, they can become real levers for the regeneration of declining urban entities (Guinand 2015). However, the tool that we propose here, and apply to Riad El Feth, highlights that this leverage depends on the

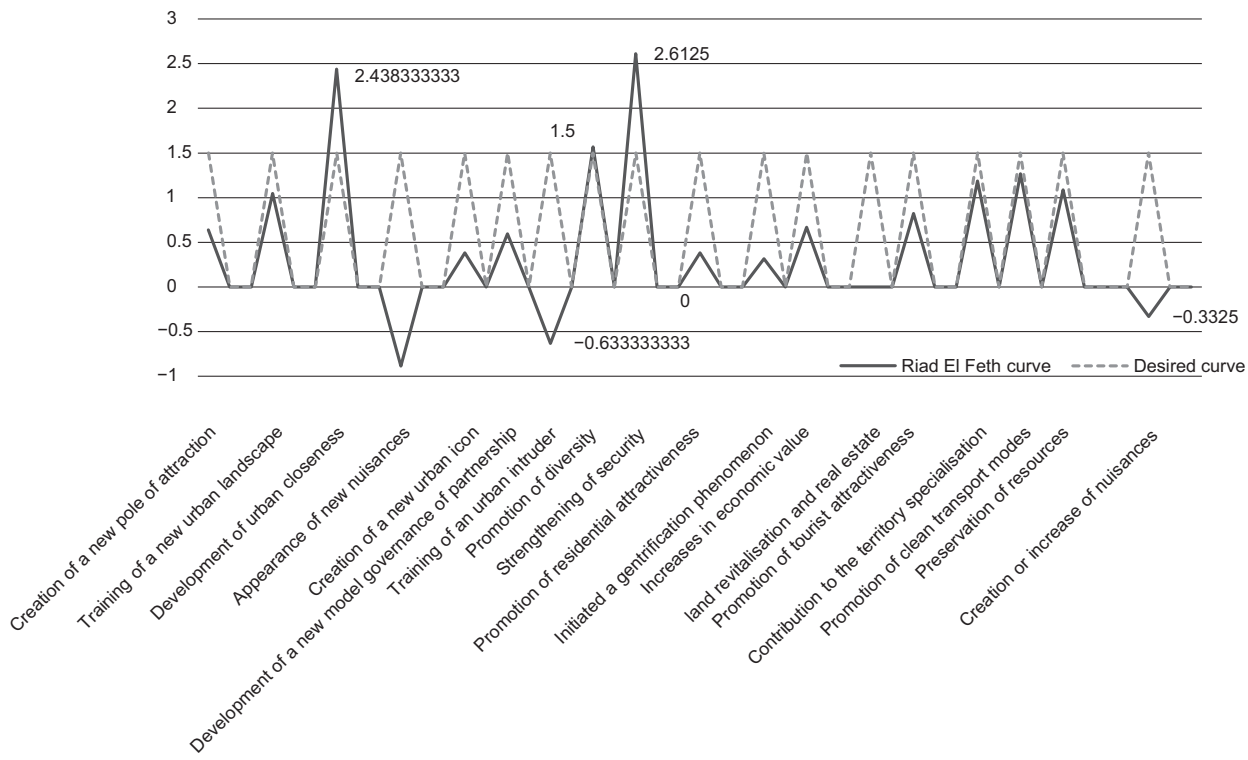


Fig. 6. The positive contamination curve for the Riad El Feth.

growth dynamic that links EFs and UR, which can be either constructive or destructive.

The example of Riad El Feth provided a context to verify that the checklist of effects proposed within the framework of the EFLUR tool, although not exhaustive, was sufficiently representative of all urban dimensions (socio-demographic, identity-related, economic, environmental and spatial). The contents of the checklist can vary depending on the characteristics and importance of an EF, and as a function of the local urban context that it interacts with. In practice, this study found that local performance can enhance or diminish the effect (Kebir 2006). With respect to UR targets, they can be clarified and supplemented as a function of local characteristics, on the condition that they remain representative of fundamental UR objectives (Fig. 3). These constraints support the systemic and holistic approach taken in the construction of the tool.

Secondly, the EFLUR is a decision tool that can support stakeholders involved in the management of a local area, and who must propose and select actions necessary to maintain a dynamic (D4) EF/ UR link. Priority must be given to actions that raise the area's profile and improve its image; therefore, actions that target EF attractiveness are a necessary prerequisite to it becoming a UR lever (Barbier 2003). Urban planning becomes a strategy for metropolitan development (Padioleau 1996). The deployment of the tool during the implementation of the various projects proposed in the Algiers Strategic Plan (Wilaya Alger, 2013) would clearly contribute to embedding the urban context in the development process.

## Conclusions

Many researchers have tackled the question of the impact of exceptional cultural facilities on urban regeneration policy. However, little attention has been paid to the evaluation of the effects of their attractiveness on local regeneration strategies. The tool presented in this paper makes it possible to evaluate the effects of EFs on development policy, with a view to undertaking necessary actions, both to amplify positive contamination and to limit detrimental effects

The application of the tool to the Riad El Feth Centre showed that despite its strategic location, the facility has not been the expected catalyst for improvements to the El Madania municipality. It appears that locating an EF in a declining area without any accompanying attempts to upgrade the neighborhood is a hazardous decision that is likely to end in failure. It is clear that a global strategy which takes the form of an urban project fosters a positive interaction between the EF and UR that favours dynamic growth or development, leading to positive contamination.

The systemic nature of such an evaluation, and in particular its participatory aspect (investigations in the field), helps to ensure the consistency of metropolitan strategies that aim to raise the profile and enhance the attractiveness of an area through local development policy. The method presented here classifies the EF in terms of its potential to act as a catalyst for the redeployment of socio-economic resources and the protection of the environment in the long term. The nesting of spatial scales, highlighted by the tool, characterises sustainable re-urbanisation in metropolitan areas (Guinand 2015).

While the EFLUR tool was applied to Riad El Feth, its performance should be verified on a broader range of EFs in order to ensure its robustness, and the scope for adaptation or extension. This would help to confirm its usefulness as a decision-making support in the implementation of UR policy. The principles it is based on could also serve as a reference for the development of other tools that address specific UR levers. The creation of public spaces, the localisation of new populations, the construction of academic establishments, the creation of new public transportation infrastructure, among others, are examples of projects that could be considered as resources. Finally, modeling the tool use would considerably simplify efforts to validate and verify its generalisation.

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