

### **Winner of the Plandag Award 2017**

This paper was the winning entry for the Plandag Award 2017, the yearly conference of Dutch and Flemish planners and city developers, see [www.plandag.net](http://www.plandag.net)

Cite as: Puts, Hanneke, Jurgen van der Heijden (2017): Toekomstwaarde als basis voor meervoudige investeringen – Kosten delen en extra inkomsten genereren, in: Geiske Bouma (Red.), *Gedeelde Ruimte, Bijdragen aan Plandag 2017*, Stichting Planologische Discussiedagen, Antwerp, pp. 187 - 196

### ***Future value as the basis for multiple investments* – Hanneke Puts and Jurgen van der Heijden**

#### **Abstract**

Thinking in terms of future values shows that one investment creates opportunities for a subsequent one. Consecutive investments and the accumulation of future values offer possibilities for multiple financing and can boost the quality of the living environment in an area. This paper shows how in a polder in Gouda, the Netherlands, three separate issues can be integrally resolved. A football pitch is in need of renovation. The pitch must be disconnected from the sewer, and to ensure the area is climate-proof, sufficient water storage and drainage is necessary. Failing to work together now on consecutive investments would be a wasted opportunity. The start of a ‘future values ladder’ is present: investment in the playability of the field, water storage, drainage and disconnecting the sewer. The ladder can extend even higher, as the initial investments also create future value for future investments in climate adaptation, water purification, maintenance and an improved living environment. The biggest challenge is not the technology but integral financing. In this paper, we develop the concept of consecutive investments and the accumulation of future values, as a basis for multiple financing and as an instrument to draw up the shared bill. We feel that demonstrating future values will motivate initiators, financiers and investors to agree to multiple projects and financing structures.

## **Future values as the basis for multiple investments**

*Sharing costs and generating extra income*

*Hanneke Puts and Jurgen van der Heijden*

### Hypotheses

1. Thinking in terms of future values means that we do not regard an investment as the culmination of a process but as the start of more investments and new future values.
2. The establishment of a specific targeted investment fund will be extremely useful for the further development of multiple projects.
3. Thinking in terms of future values makes a planning framework more urgent whilst this approach also creates more room.

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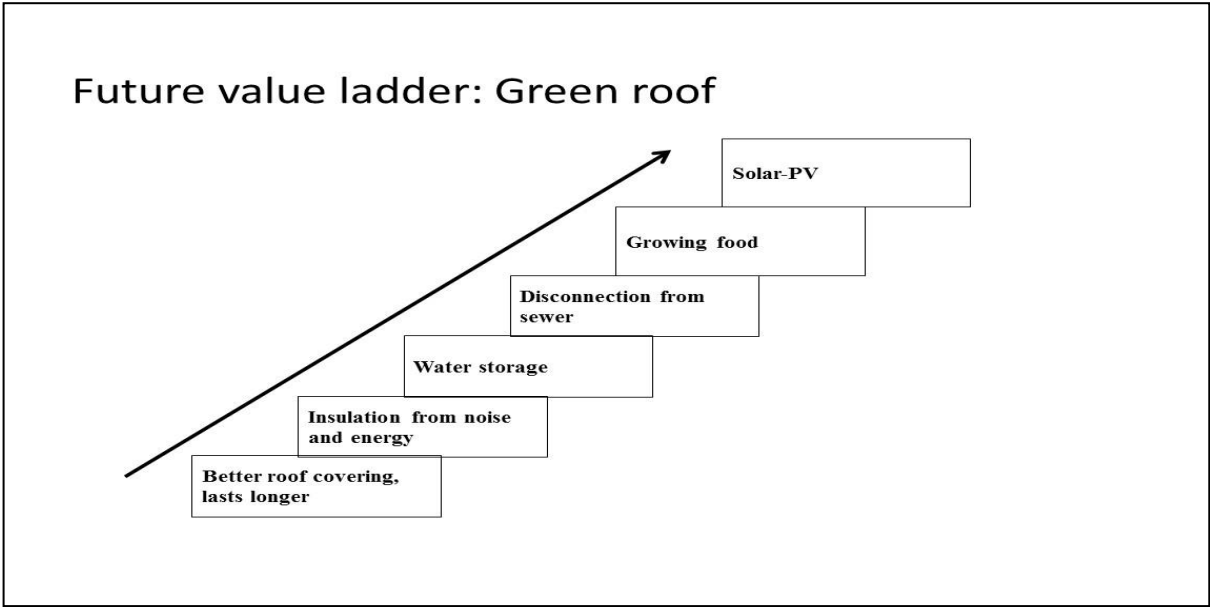
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# Future values as the basis for multiple investments

## *Sharing costs and generating extra income*

### **1. Introduction**

Old investments made some time ago can lead to unforeseen savings and new income. We see a development that starts with revaluing an old investment and retaining that investment for its current function. For example, a green roof which makes the existing roof better, because it will last longer. The old investment is given an additional function: a layer of vegetation. That provides energy and sound insulation, indoors and out. Further in the future, new values can be created for the green roof, such as capturing water, which would then make it possible to disconnect the roof from the sewer. Furthermore, the roof offers potential for growing crops or generating solar energy which generates much more revenue on a green and cool roof. Thus a ‘future values ladder’ is created: see figure 1.



**Figure 1. Future value ladder Green roof.** Investing in a green roof creates value for future investments.

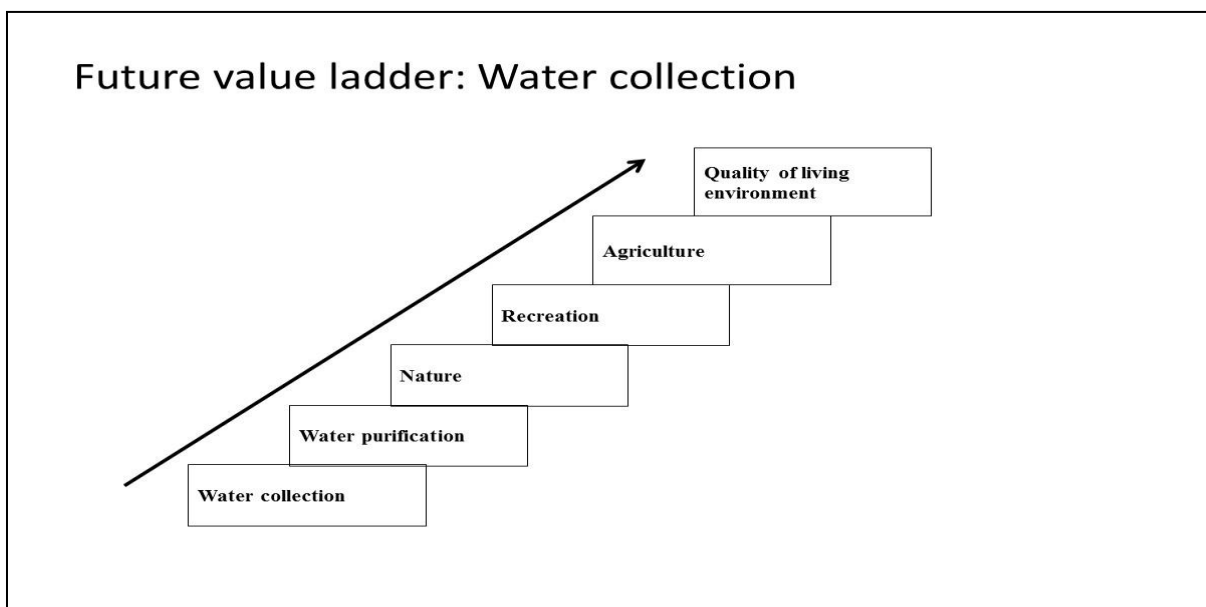
The green roof illustrates a multiple business case which can have more frequent earning potential because these old values provide further return on investment, create new values and offer a realistic option for future values. In the above example, installing a solar panel is a realistic option – but it has not yet been installed. Realistic means that this option deserves serious consideration because the value depends on what can be achieved in the future. This future value will result from a previous investment and therefore concerns a multiple business case.

A multiple business case involves more than a single investment by different parties, made at the same moment. It is much more interesting to see how this develops over the years into an increasingly multiple business case. In this paper, we develop the concept of consecutive investments and the accumulation of future values as a basis for multiple financing and as an instrument for drawing up the shared bill. We feel that demonstrating future values can motivate initiators, financiers and investors to say yes to multiple projects and financing structures.

## 2. Multiple investments

When revaluating an old investment and creating new functions around that existing investment, there is a good chance that the next investment will be a co-investment.<sup>1</sup> This reduces costs for purchasing resources, such as land or a building, and in construction costs. Take, for example, a water collection area that is adapted at the same time for water purification and nature development. Water managers share and save the costs of establishing the water collection and water purification area. The obvious next step is to add nature to the area. Thus, the nature manager acts as a third investing party, enabling further division of the costs. Nature additionally enhances the functions of water collection and water purification, causing revenue to increase.<sup>2</sup>

Because the area will be used by the three functions together, the water collection company and the nature manager share the costs with the water manager. The parties engage in joint exploitation, which helps save costs and generates new income: the ground helps retain and develop nature, thus improving the water purification function which generates money. The extra cost savings can be added to the existing savings, and the extra income from added value can be added to the existing added value. A next step might be recreation or agriculture, which can also generate revenue from savings and added value which can be added to the total. On top of that, we can state that all these functions help improve the living environment. This results in a ‘future value ladder’ for creating a water collection area. See figure 2.



**Figure 2. Future value ladder water collection.** Creating water collection also invites investments for water purification, nature, recreation and even creates future value for agriculture and the quality of the living environment.

It is also possible to block the accumulation of future values. That happens when a choice is made early on in the process which conflicts with the creation of new future values. The order in which choices are made is important. In the example of a roof, the installation of solar panels as the first step on the ladder leads to a lock-in situation: once the solar panels have been installed, it is no longer possible to create a green roof, so water storage, insulation of energy and noise and disconnection from the sewer are less easy to achieve. The decision to start by installing solar panels means that it is not possible to work

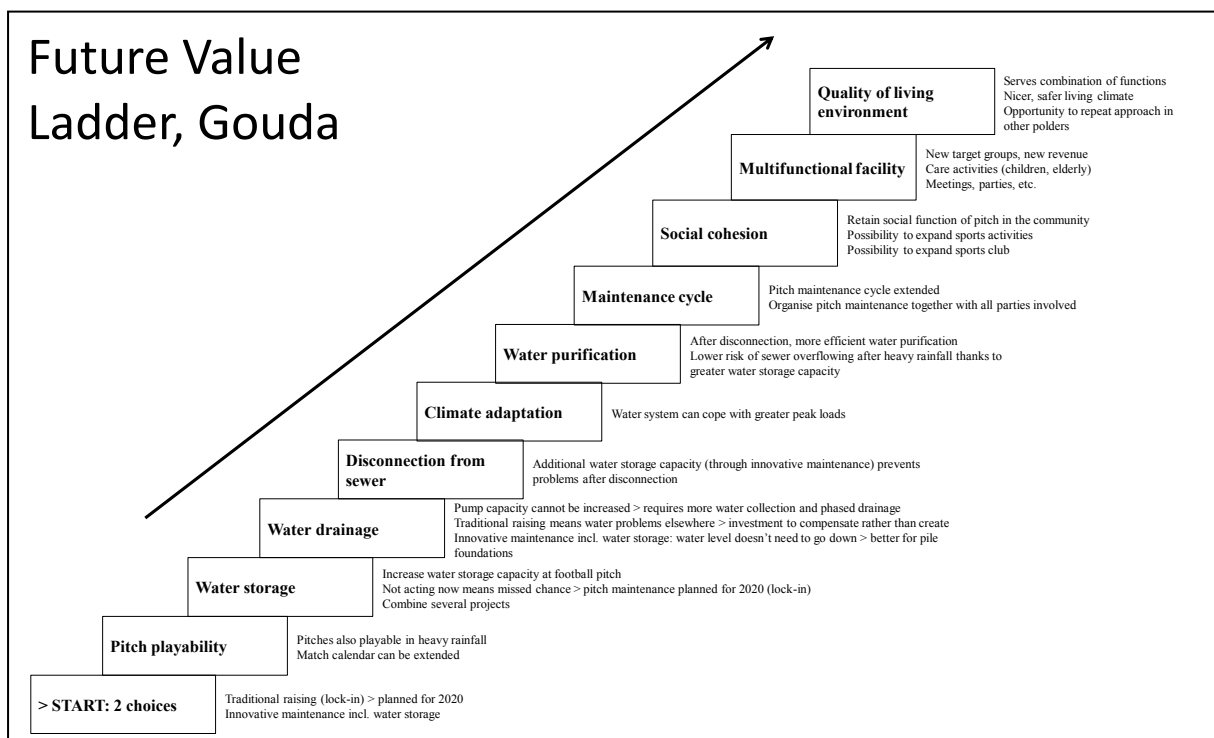
<sup>1</sup> Van der Heijden and Van Engen

<sup>2</sup> For more examples, see Van Popering – Verkerk and Van Buuren

towards the future value ladder and that you create a ‘lock-in’. Mutual strengthening of functions is also known as linkage.<sup>3</sup> In a lock-in, linkage is blocked rather than achieved.

### 3. Sharing the bill – an example from Gouda

In a polder in the municipality of Gouda, the Netherlands, three separate projects can be integrally resolved. A football pitch is in need of renovation. The pitch must be disconnected from the sewer, and to keep the area climate-proof, sufficient water storage and water drainage is required. Traditional renovation means raising the field. This would result in the football pitch losing its – unofficial – function as water storage location. The municipality would have to create even more water storage capacity on top of the current project to compensate the loss of the collection option on the football pitch. The water board runs the risk of flooding occurring elsewhere in the polder after the football pitch is raised. Not working together now would be a wasted opportunity. Innovative renovation offers the opportunity to achieve a water storage facility underneath the football pitch. This creates a number of multipliers: the pitch remains playable more often and to an improved degree. The municipality increases its current water storage capacity and the water board reduces the risk of problems elsewhere. The start of the ‘future values ladder’ is established: the playability of the pitch, water storage, water drainage and disconnection from the sewer. The ladder can extend even higher: climate adaptation, water purification, maintenance and improved quality of the living environment. See figure 3a.

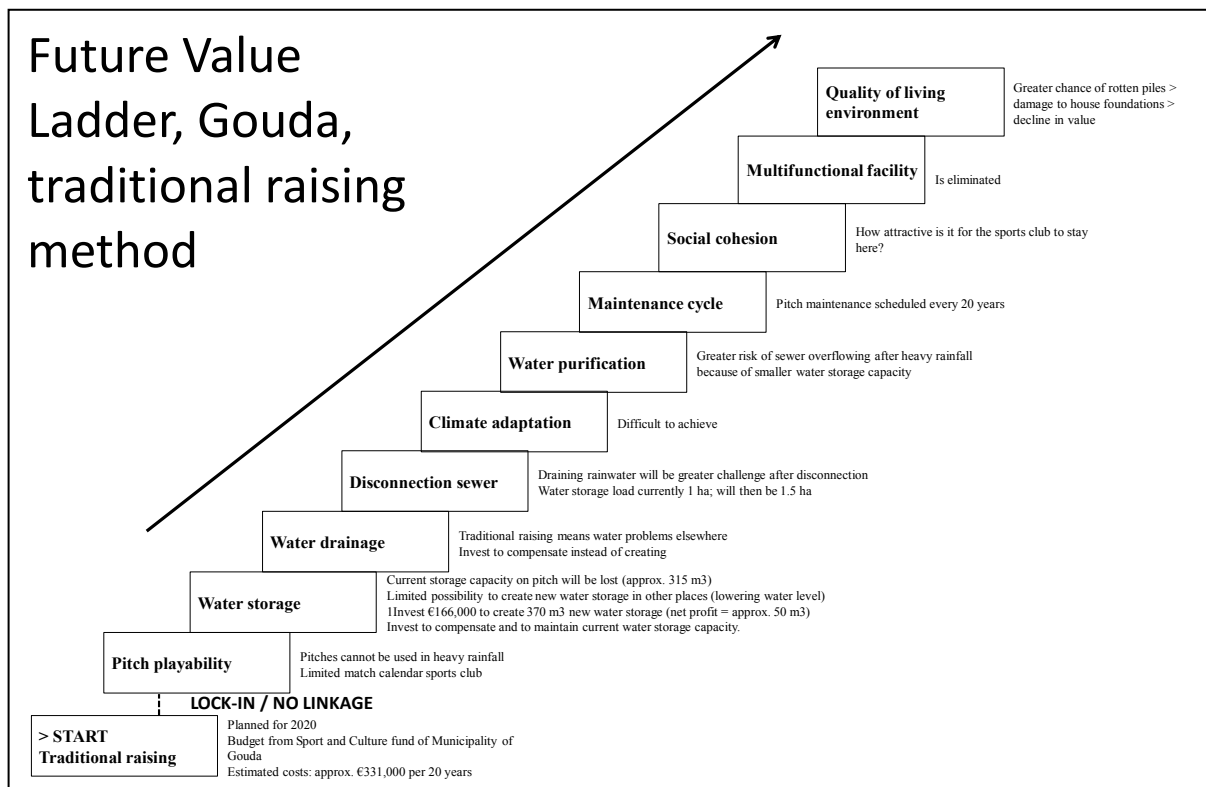


**Figure 3a. The potential ‘future value ladder’ of Gouda.** Elaboration of the future values ladder for Gouda created by choosing an integral solution right at the start, rather than a lock-in situation. Traditional maintenance (raising the pitch) would have meant that some or all of the upper rungs could not have been reached (lock-in).

The pitch manager consulted the municipality of Gouda about the planned renovation of the pitch. The manager asked whether it might be a good idea to brainstorm together about a solution for the pitch which currently (unofficially) serves as a water storage area: an advantage for the municipality, a disadvantage for the sports club. Raising it in a traditional manner – even temporarily – would solve

<sup>3</sup> WRR, page 159. Another term for linkage is interest merging, see Van Hal.

pitch playability problems for the pitch manager and the sports club. Temporarily, because although the pitch would have been raised after the renovation, the effect would be negated by sinking and autonomous subsidence within a few years and the whole process would have to be repeated. The question was whether an innovative solution could be found to guarantee both the playability of the field and the water storage location. For the pitch manager and the municipality, it became clear early on that working together was the only way to achieve an integral solution that met all the organisational interests and that would make the area more climate-proof. In the case of Gouda, not choosing the integral solution would soon create a ‘lock-in’ situation and increase the individual burden on each party. See figure 3b.

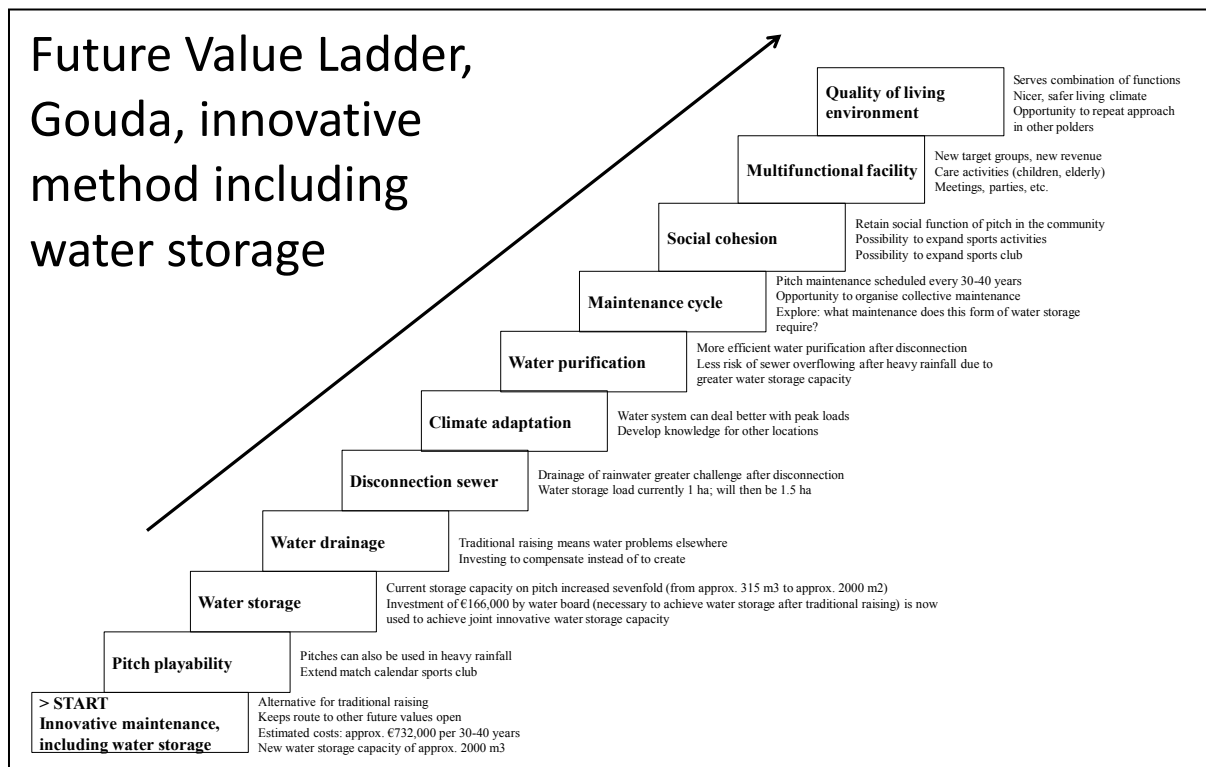


**Figure 3b. The future value ladder for Gouda in the case of traditional raising of the pitch.** Choosing to raise the pitch in a traditional way immediately creates a lock-in situation. Subsequent future values can then no longer be achieved, or only to a much lesser degree. This first investment would therefore not create a cumulative effect, but would require investments to compensate the undesired effects of the initial choice.

Without cooperation, maintenance of the pitches will have to be carried out in 2020, which in this case means being raised in the traditional way. For the sports clubs, this means that, in the long term, the pitches will be flooded more frequently as a result of heavy rainfall and autonomous subsidence, making them even less frequently playable than is now the case. Furthermore, the cycle of required maintenance on the pitches will become much shorter than when an integral solution is chosen. For the municipality and the water board, failure to coordinate with the pitch manager now will mean that the current (informal) water storage option on the pitches will be eliminated, increasing the problem of achieving sufficient water collection already facing Gouda (1.5 ha additional water collection needed instead of 1 ha).

Not working together creates a lock-in for all parties: the future values you can accumulate by working together can no longer be achieved due to the initial choice for traditional maintenance. In this situation,

it is no longer possible to create future value for a following investment with a single investment. The water board has an important role in making it possible to ‘climb’ the future value ladder. It has an incentive to take action only when traditional maintenance is required, as that is when imminent water problems elsewhere become apparent. In case of traditional maintenance, obviously, the water storage facility on the pitch will be eliminated. Figure 3c shows which future values are in the pipeline and how these strengthen each other when innovative pitch renovation is chosen.



**Figure 3c. The future value ladder for Gouda in the case of innovative pitch maintenance.** Innovative pitch maintenance ensures that several future values can be accumulated; that more interests and goals of more organisations can be achieved; and creates opportunities for joint investment.

#### 4. Financing

In Gouda, it is not the technology but integral financing which forms the greatest challenge. Traditionally, pitch maintenance is financed from a joint ‘sport and culture’ fund. For the innovative solution in this case, this must be supplemented with municipal budget for disconnecting the sewer, and with budgetary means from the water board in order to achieve sufficient water storage and water drainage. In multiple projects, parties share the costs and strengthen each other’s profits when things go well. This multiplicity, however, is regarded as a risk by many. These sceptics include financiers, which creates an obstacle to multiplicity. For professionals from the financial world and municipal and water board executives, it is interesting to explore the possibilities of an investment fund focused on multiplicity. Even if we assume that such a fund will primarily target social returns, a financial business case is nevertheless in order. While the fund may have a very low return on investment compared with banks, for example, it must naturally avoid losses. It is important to have a portfolio of 20, or perhaps as many as 50, projects like the case in Gouda. These projects can benefit from each other because a fund<sup>4</sup>:

<sup>4</sup> Result of the master class ‘Naar een investeringsfonds voor meervoudige projecten’ [Towards an investment fund for multiple projects] dated 15 November 2016 in Utrecht organised and designed by the authors together with the two programmes of the Dutch Ministry for Infrastructure and the Environment.

1. Makes (part of) the money revolving
2. Accumulates knowledge: aids one time players by being a repeat player
3. Is an external party which, as an outsider, can contribute its own (and new) insights
4. Can spread risk
5. Can think and work with an eye to the long term
6. Can help finance various bigger projects at the same time by attracting sufficient financial volume from different parties

Another essential condition is to learn how investment from the municipality returns to benefit the municipality itself rather than, for instance, the water board. If such parties are unable to clearly articulate this benefit, they are in a weak position towards representatives of the public who will hold them accountable, and rightly so. The answer, then, is to break down the multiple project. This starts with the simple observation that in such a project, a single resource such as a football pitch is used for two or more goals. Costs are therefore avoided by sharing them, extra revenue is generated and the resource in question can be used in the future for even more functions, thus avoiding additional costs and generating even more revenue. Breaking down such line items provides an overview of savings and revenues now and in the future. That is an instrument for drawing up the shared bill.<sup>5</sup> In the case of Gouda, this would look like the one in figure 4:

	Costs avoided by sharing them, for:	Additional revenue through:
<b>Buying or renting an area (i.e. land) together</b>	sport, water management and climate adaptation	(none)
<b>(Re)building together</b>	raising football pitch, creating water collection area, measures for climate adaptation	(none)
<b>Shared exploitation</b>	management and exploitation of area for sport, water and climate adaptation	multipliers: better football pitch, extra water storage quality, social cohesion, improved quality of living environment
<b>Future value</b>	more shared costs through extra investments and use of the same area	more multipliers through extra investments and use of the same area

Figure 4. The bill for Gouda, broken down.

## 5. Conclusions

For nearly fifty years, a general societal trend inside and outside the construction sector is that ‘it is becoming increasingly difficult to say yes’. Saying ‘yes’ to more homes is what everyone wants, but where should they be built? Saying ‘yes’ to more space for water collection is what everyone wants, but where? Not only is space becoming increasingly scarce, the resilience of the environment – in terms of absorbing greater burden of traffic or industry – is declining. People want to say ‘yes’, but there has to be room. A result of this trend is seen in business cases that make it possible to say ‘yes’ again. That ability is down to their multiple character whereby they have two or more functions. Think of a football pitch that also collects water; this fits better than having both a football pitch and a water collection area.

Opportunities for achieving consecutive future values are already present in the physical space, in both the urban and rural environment. The trick, then, is to recognise that value. It’s about turning investments around. About no longer seeing an investment as the culmination of a process, but as the start of even

<sup>5</sup> Van der Heijden and Bakker, page 71



more investments and new future values. It's about learning to see that existing investments made long ago can offer new opportunities: opportunities to add value, share and save costs and integrate new revenue, combine projects and look for integral solutions that serve the goals of several parties. It starts with revaluing old investments, then adding new functions and then creating future value. In this way, we can make optimal use of the wealth of freely-available resources all around us (if we can only see them) and roll out the red carpet, as it were, for consecutive investments.<sup>6</sup>

Thinking in terms of future values forces us to examine each investment to see what opportunities it might create for subsequent investments. This can make the planning framework much tighter than it is now. At the moment, such planning frameworks are relatively vague about what the current investor does to pave the way for the next, and how this subsequent investor should build on what existing investors have already prepared for them. Thinking in terms of future values forces both parties to be more specific: current investors must indicate what they have prepared and future investors must indicate what they are going to do with it. To view this development as a drastic curtailment of the possibilities for development and a very narrow attitude to planning frameworks would be a shame – and a grave mistake as well. In fact, future values create a great deal of scope for creativity and links to numerous environmental values, as we can see from the Gouda example. They also offer opportunities to save costs and add value, and thus create financial scope. Ignoring future values, on the other hand, can lead to missed linkage opportunities, which will hinder a great deal of value development.

Future values create space, including financial space, where it is in short supply. They shed new light on the multiplicity of investments. Instead of being accumulated in one go, investments may also be consecutive. At minimum, the risk of lock-in demonstrates that there is a great deal to learn here. In the visualisations of the Gouda case, figures 3a to 3c, for instance, it appears as if each higher future value is a direct consequence of the lower future value. This need not necessarily be the case: effect and investment may also differ. Here, for example, maintenance of the pitch triggers an investment in water storage, which triggers disconnection from the sewer and a better water drainage system. Cause and effect could just as well be reversed, or the result of a desire for climate adaptation. What's important is to learn how one investment triggers the next investment, and to identify the causes and effects at play. This also means learning about withdrawal of investors, about parties who walk away. A specific investment fund is a good place to accumulate, retain and pass on that knowledge.

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<sup>6</sup> See also Water Governance Center.