## *Applying Earned Benefit Management*[1]

# Disappearing Benefits[2]

**You can't simply pick and choose your investments!**

**By Crispin ("Kik") Piney, PgMP, PfMP**

### Introduction: Link to the Previous Article

The tagline of the previous article was "If you can't track the allocations, you can't understand the situation" and explained how to determine the allocation to the costs of each component project throughout the lifetime of the program. The article showed how to apply that algorithm to the case study and identified that one of the component projects and a number of the intermediate nodes clearly cost more than they contributed to the ultimate benefits. It finished with the warning that more information about the overall program benefits model was needed before any decisions could safely be taken on how the set of components might be modified to provide the optimal business result. The current article will explain the points to take into account when optimizing the portfolio in this way, and will demonstrate the potential issues that could be caused by taking a simplistic approach.

### Reminder on Benefits Maps

The first articles [Piney, 2018b; Piney, 2018c; Piney, 2018d] in this series [Piney, 2018a], explained how to build a benefits realization map (BRM), how to evaluate the contribution of each component of this map to forecast the strategic benefits of the total program (the "Benefits Allotment Routine" – BAR), and how to evaluate the corresponding allocation of costs to each element of the realization map by using the Break-Even Everywhere Routine (the BEER). These concepts were illustrated on a simple case study. This introduction provides a brief reminder of these ideas.

A BRM illustrates how to make the benefits happen. It can be constructed as follows.

Once the anticipated benefits have been defined by the strategic sponsor, you need to determine all of the steps that are required to construct this result, thereby allowing you to identify the necessary component projects. The dependencies from each logical step to the next are quantified for each step in the logical chain. The BAR uses the forecast value of the

[1] This series is by Crispin "Kik" Piney, author of the book Earned Benefit Program Management, Aligning, Realizing and Sustaining Strategy, published by CRC Press in 2018. Merging treatment of program management, benefits realization management and earned value management, Kik's book breaks important new ground in the program/project management field. In this series of articles, Kik introduces some earned benefit management concepts in simple and practical terms.

[2] How to cite this article: Piney, C. (2018). Disappearing Benefits, Series on Applying Earned Benefit Management, *PM World Journal*, Vol. VII, Issue VIII – August.

strategic objectives in conjunction with this link information to calculate the contribution of every node in the BRM to the anticipated benefits. In particular, the BAR evaluates the contribution to the anticipated benefits of each component project. This value is known as the "Earned Benefit At Completion" (EBAC) of that component project.

Once the full set of parameters that define the model is known (predicted benefits, estimated cost per initiative, and the structure of the benefits map, including the contribution fractions), no additional assumptions on the model are required in order to use these parameters to evaluate to cost of each intermediate node in the model. The return on investment of any node can then be evaluated from its benefit contribution and its cost allocation.

The Earned Benefit of a component project (initiative) at a given point in time is evaluated from its EBAC in proportion to the its degree of completion at that point – i.e., the Earned Value "percent complete" of this project. As a first approximation, the Earned Benefit of the total program is defined as the sum of all of the project Earned Benefits. This definition of the program Earned Value will be revisited in the next article in this series, taking into account concepts defined later on in the current article.

**Clarifications**

I received the following comment on an earlier article (Piney, 2018c):

1. "How can you claim to measure benefits when the project has yet to be completed? […] Asked another way, how can Activity A produce any measurable benefits until Activities C and D are also finished and the services actually implemented?"

I gave a partial answer in Piney, 2018d and proposed to complete it in the current article. Once I had started work on the full explanation, I came to the conclusion that it was sufficiently interesting and involved to warrant its own article. This additional article will therefore be added to this series as a follow-on to the current article.

**The Case Study for the Current Article**

The business objective of the program in this example is to increase profits for an organization in the area of customer service. For the purpose of the case study, strategic analysis by senior management has shown that increased customer satisfaction with after-sales support enhances business results and has the potential for delivering additional revenue of €300,000 per annum compared with the current level of business, but that this service will also lead to an increase in operational costs amounting to 25% of the corresponding financial improvement, thereby reducing the net benefit by the corresponding amount.

In the previous articles, the steps to achieving the business objective were developed and quantified, all the way back from the required strategic outcome across to identifying the projects required. The corresponding benefits map for this program, including the financial numbers mentioned above, are shown in Figure 1. One notable point about this case study is that, although the overall figures show a healthy return on investment, one component project (B: *Call Handling Tool*) costs more to the program than it contributes to the final benefit.

However, the first article (Piney, 2018b) explained why the inclusion of this initiative may still be justified, and more information is needed before a decision can be made reliably on whether or not to exclude it. The current article will address this challenge, explain the potential incorrect decisions, and show the corresponding financial impact that these would have. The first step is to understand the concept of essential links.

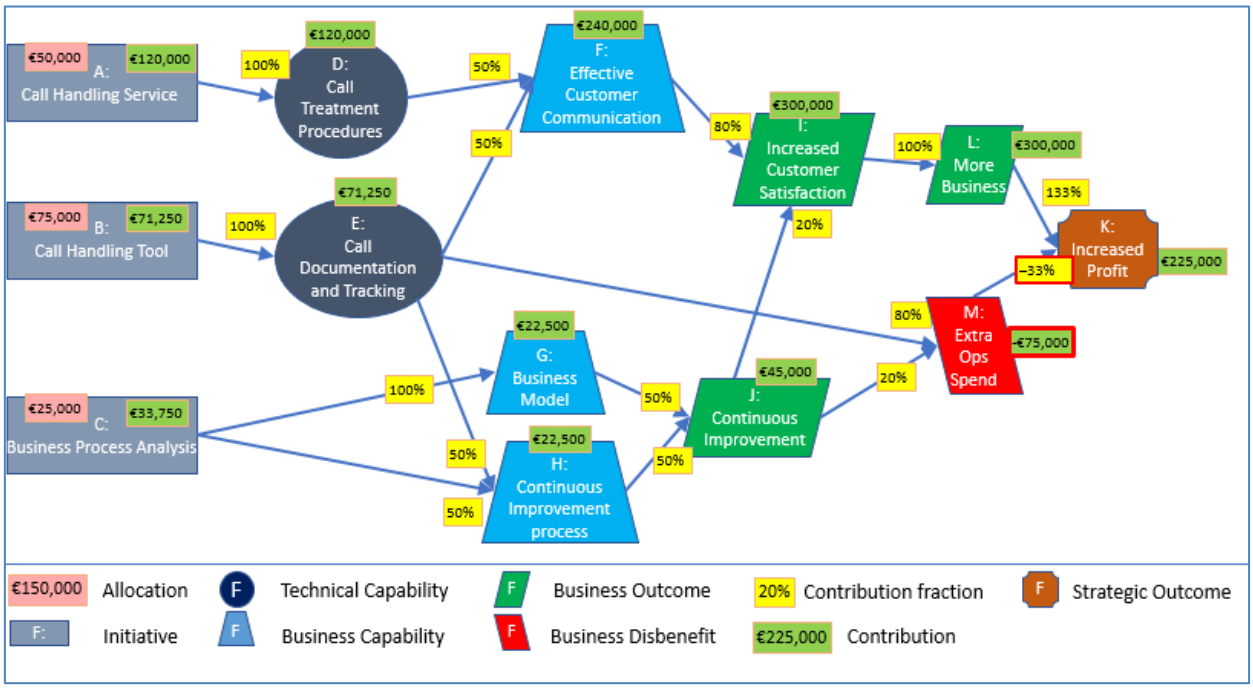


**Figure 1: Complete Benefits Map for the Case Study**

## Understanding Essential Links

The concept of essential links is based on the following characteristic that can affect a result, when the result depends on a number of inputs: although some of the inputs may contribute very little to the final result, the existence of one or more of these inputs may be an absolute pre-requisite for achieving any form of result. For example, in marathon running, your shoes contribute much less than your fitness to your performance, but without even one shoe, you will be unable to take part. Links in the benefits map with this characteristic are described as "essential links".

It is fairly evident that the difference between essential and normal links ceases to be relevant to the result once the corresponding source node has achieved its full potential (e.g., once you are wearing your shoes for the marathon).

The concept of essential links has to be taken into account in two key areas for benefits realization: optimization of the benefits realization model, and the calculation of Earned Benefit.

We will first address model optimization as that analysis will answer the question that has been unanswered since the second article: how best to address an initiative with a negative return

on investment? The second point about calculation of Earned Benefit in the presence of essential links will be presented in the subsequent article mentioned earlier which extends the Earned Benefit concepts to provide a schedule forecast for actual realization of the benefits.

## Optimizing the Model

We will now address the question of what we should do about the fact that, as shown in Figure 1, B: *Call Handling Tool* contributes less to the total benefit than it costs.

Let us start from the obvious approach, before including the possibility of critical links.

*Simplistic Optimization*

The full business plan is based on a total program contribution of €225,000 for a total cost allocation of €150,000 – i.e., a healthy profit of €75,000 and return on investment (ROI) of 50%.

We are now in a position to go more deeply into the question that was raised in April [Piney 2018c]: should we remove node B: *Call Handling Tool* to address the fact that it costs (€75,000) more than it delivers (€71,250)?

The revised Benefits Realization Map diagram after removal of node B and the corresponding capability (E: *Call Documentation and Tracking*) is shown in Figure 2.

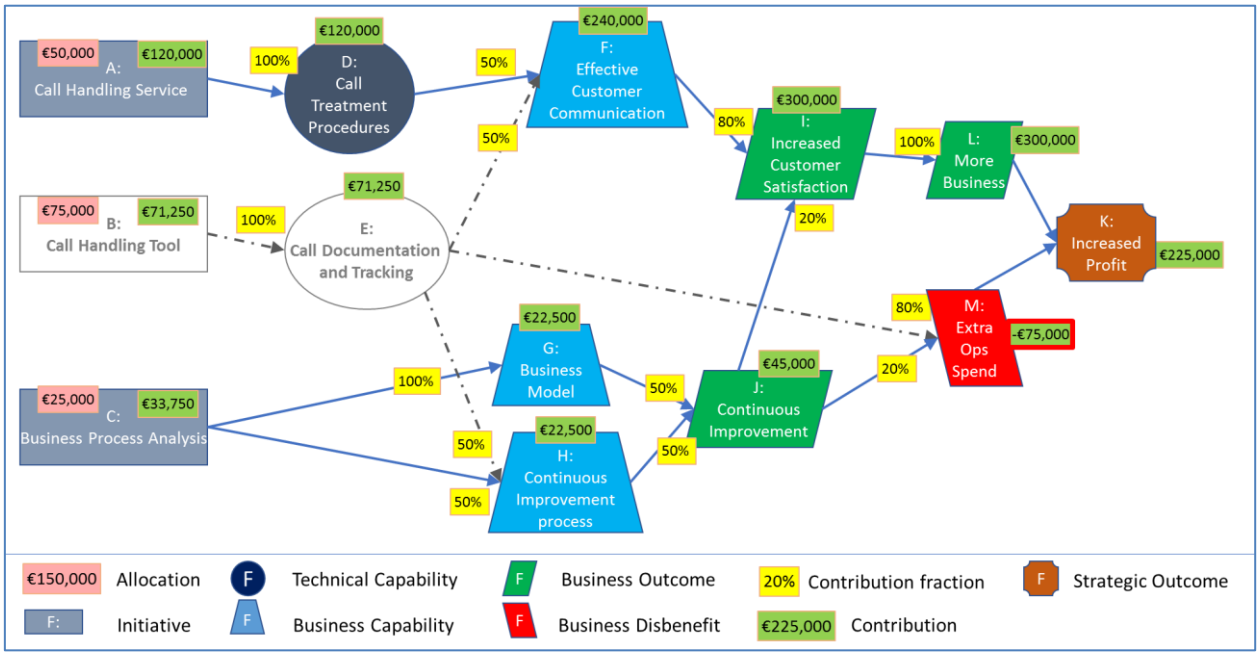


**Figure 2: The Benefits Map Indicating the Nodes to be Removed**

As can be seen from Figure 2, the loss of node E entails the additional removal of all of its outgoing links – in this case, those to nodes F, H, and M. This removal, in turn requires the contribution fractions to those nodes to be recalculated. The method for carrying out this recalculation is not intuitively obvious and is explained in detail in my book, but it is rather too involved to be explained here. It makes use of the features of the BEER to maintain the inherent logic of the original contribution fractions and thereby avoids the need for any

additional, and potentially subjective, hypotheses. The result of applying this Pruning and Link Evaluation (PALE) algorithm is shown in Figure 3.

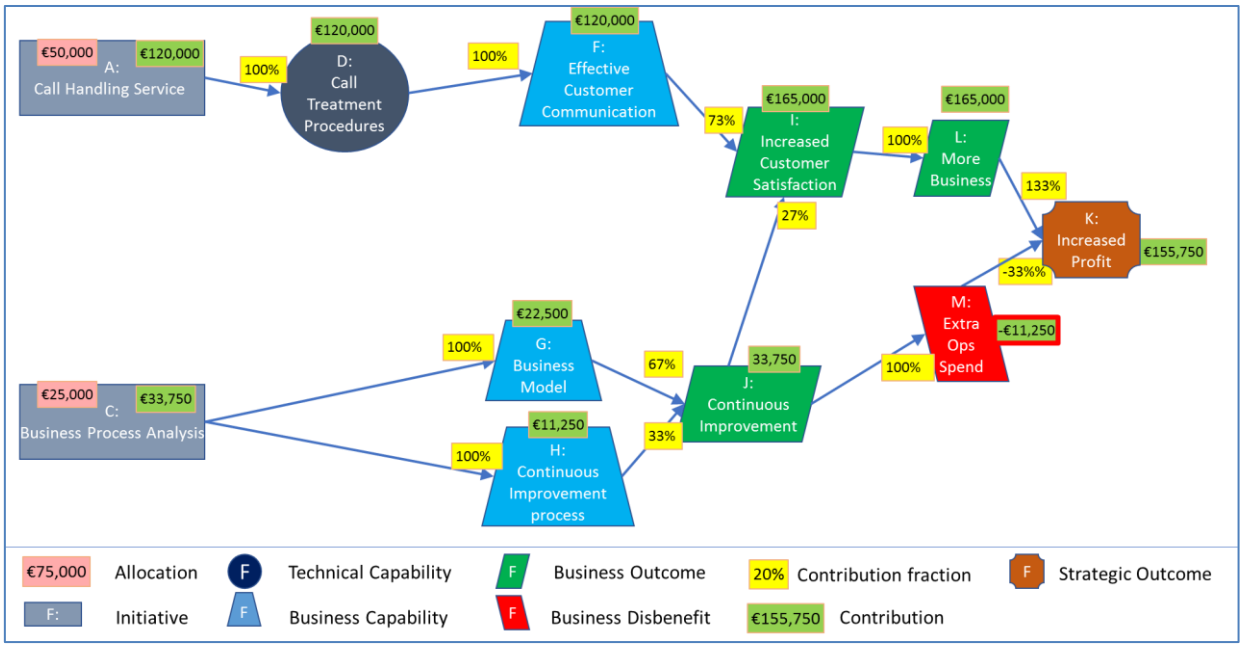


**Figure 3: Recalculated Contributions for the Pruned Network**

If we can, in fact, omit this negative-ROI node (B) without generating any side effects, the costs will drop by its cost allocation of €75,000 and the corresponding benefits by its contribution of €71,250, leading to an increase in profits of €75,000 – €71,250 = €3,750. This translates to halving the total investment and an increase in the total profit, with, as result, more than doubling of the ROI. Most managers would jump at that option without a second thought.

However attractive the option appears to be, it still needs to be reviewed in order to assess whether our simplistic analysis is reliable. In the current example, this turns out not to be the case.

*Beware of Essential Dependencies*

Now that the concept of essential links has been explained, the model needs to be reviewed in order to assess whether the simplistic decision just presented is reliable.

The following information has been added to the case study: an analysis of the requirements for effective customer communication has indicated that, although E: *Call Documentation and Tracking* only contributes to F: *Effective Customer Communication* to the same level as D: *Call Treatment Procedures*, if documentation and tracking are missing, there can be no worthwhile communication to provide. For this reason, as shown in Figure 4, the link from E: *Call Documentation and Tracking* to F: *Effective Customer Communication* has been identified as essential.

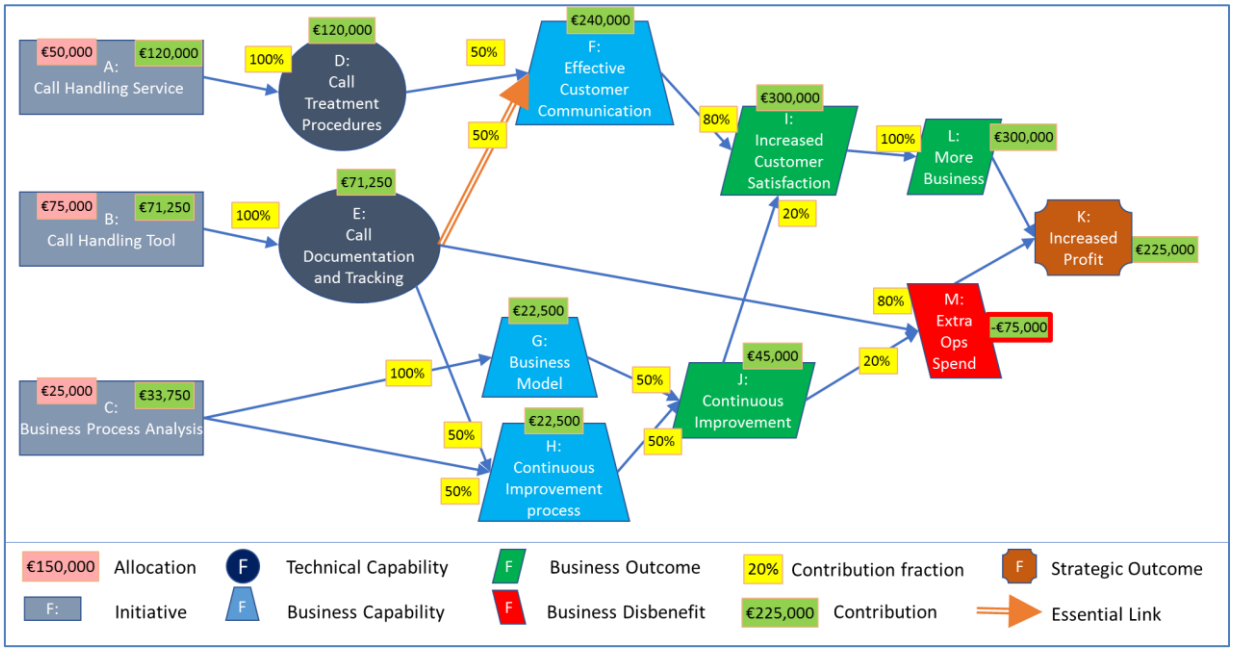


**Figure 4: Addition of one Essential Link to the Map**

This single, apparently small, addition to the model has a major set of consequential impacts on the options for optimizing this program.

The analysis of the sequence of effects of taking the essential link into account when removing node B is shown in Figure 5 and itemized below.

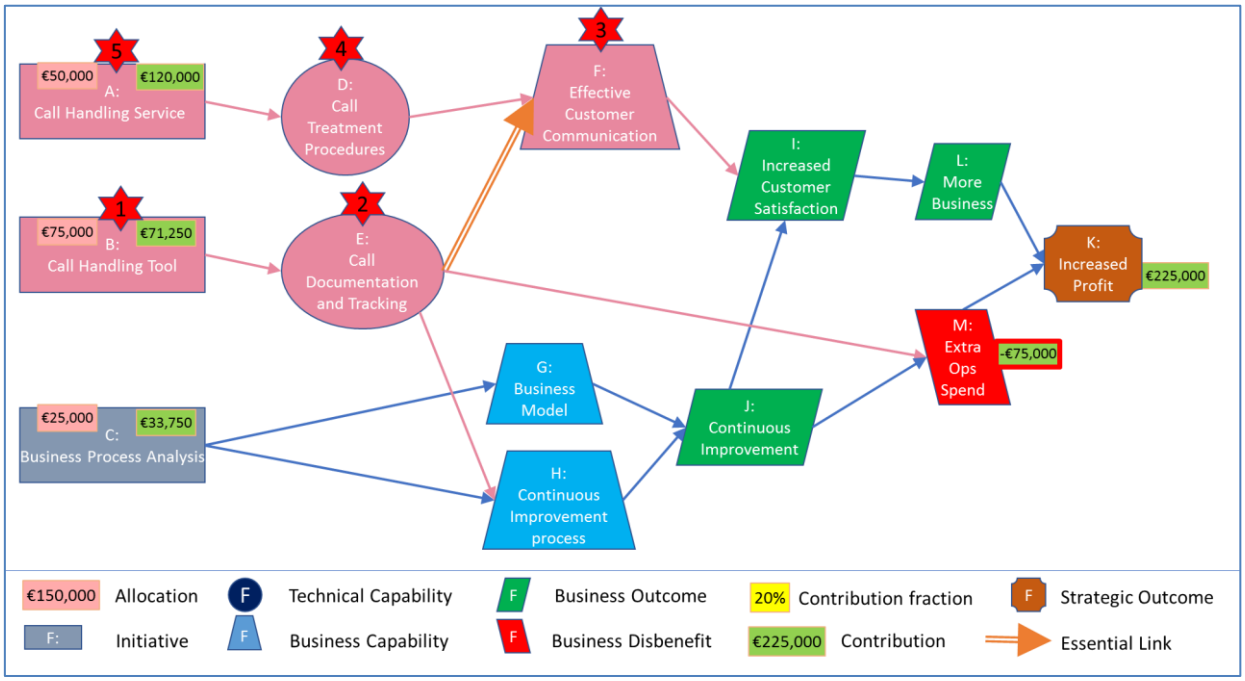


**Figure 5: The Five Steps Involved in the Removal of Node B**

1. The first step, by hypothesis, is the removal of node B: *Call Handling Tool*.

2. Node B: *Call Handling Tool* is the only project contributing to E: *Call Documentation and Tracking*. Without node B, therefore, node E ceases to exist.
3. By hypothesis, node E, which has just disappeared, is an essential precursor to node F: *Effective Customer Communication*, so node F needs to be removed from the map.
4. If node F is no longer a potential outcome, its single predecessor D: *Call Treatment Procedures* is superfluous and should be deleted.
5. Now that the capability of treating calls – i.e., node D – is no longer worthwhile as part of the map, the corresponding initiative, A: *Call Handling Service* serves no useful purpose in the program.

In brief, this means that removal of node B: *Call Handling Tool* makes node A: *Call Handling Service* surplus to requirements and a waste of time, effort and resources.

The PALE algorithm mentioned above can be applied to this modified model, and the resulting Benefits Map is shown in Figure 6.

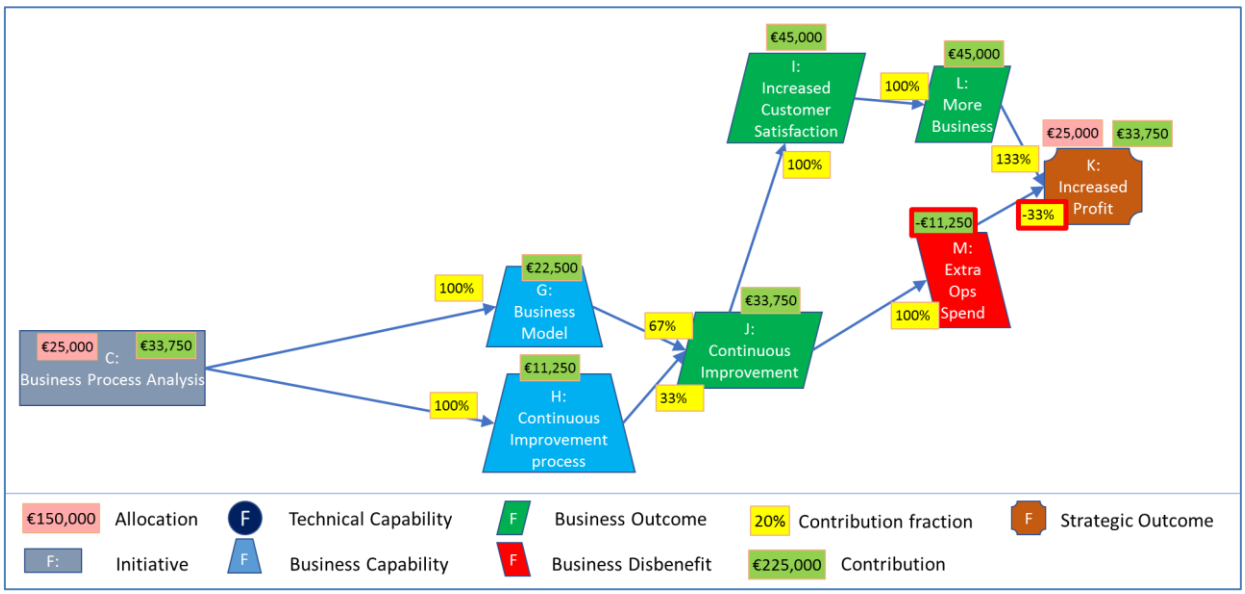


**Figure 6: The Recalculated Pruned Model after Taking into Account the Essential Link**

As can also be seen from Figure 6 or by direct calculation, taking into account the simultaneous disappearance of nodes B and A, the financial result is as follows:

- The investment allocation is the estimated cost of Node C = €25,000 as provided for the original model. There is no reason for this to have changed.
- The total contribution to the planned benefits is calculated as follows from the numbers in Figure 1 that were obtained using the BAR. Take the original forecast contribution of node K (€225,000) and subtract the "lost" contributions of nodes B (€71,250) and A (€120,000). By definition, this provides the calculated value of node C – i.e., €33,750.

As a result, at best, if the option of cancelling work of the *Call Handling Tool* is adopted, you will be left with a significantly reduced program, providing an estimated profit of

€33,750 – €25,000 = €8,750 and an ROI of 35% - a sadly-shrunken prospect compared with the original plan.

However, and this is where the sad reality of many program decisions is clearly highlighted, if this analysis were not carried out prior to making the decision to cancel work on the *Call Handling Tool*, the work on A: *Call Handling Service* would proceed as planned. As our analysis has just shown, this work would deliver no extra value, so total contribution of the set of initiatives is still limited to the contribution of node C (€33,750). However, the costs of both nodes C and A will be included in the allocated budgets – i.e., €25,000 + €50,000 = €75,000.

The reality of this situation is therefore a ***loss*** of €75,000 - €33,750 = €40,250 and an ***ROI of minus 55%***.

To add unfairness to incompetence, in this case, it is all-too-common for management to categorize A: *Call Handling Service* as a "failed project" even if it delivers the required capability on time and to budget, and to make a scapegoat of the project manager of A: *Call Handling Service* for failing to create any added value. This allows the decision-makers to shirk their strategic responsibility for the failure, and serves to ensure that similar loss-making situations will occur again in the future. Of course, no one benefits from this type of behaviour.

**Conclusion**

We have seen the pitfalls associated with attempting to optimize a program model if the concept of essential links within the benefits map are not taken into account. This simplistic approach can turn a viable dream into an incomprehensible nightmare.

The next article in the series will apply the concept of essential links to provide a more accurate evaluation of Earned Benefit both as a tool for program performance analysis during implementation and also as a basis – taking into account the potential delays between outcomes and benefits – for forecasting and then tracking the schedule for the actual realization of these benefits.

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## About the Author

### Crispin ("Kik") Piney

France

After many years managing international IT projects within large corporations, **Crispin ("Kik") Piney**, B.Sc., PgMP is now a freelance project management consultant based in the South of France. At present, his main areas of focus are risk management, integrated Portfolio, Program and Project management, scope management and organizational maturity, as well as time and cost control. He has developed advanced training courses on these topics, which he delivers in English and in French to international audiences from various industries. In the consultancy area, he has developed and delivered a practical project management maturity analysis and action-planning consultancy packages.

Kik has carried out work for PMI on the first Edition of the Organizational Project Management Maturity Model (*OPM3™)* as well as participating actively in fourth edition of the *Guide to the Project Management Body of Knowledge* and was also vice-chairman of the Translation Verification Committee for the Third Edition. He was a significant contributor to the second edition of both PMI's Standard for Program Management as well as the Standard for Portfolio Management. In 2008, he was the first person in France to receive PMI's PgMP® credential; he was also the first recipient in France of the PfMP® credential. He is co-author of PMI's *Practice Standard for Risk Management*. He collaborates with David Hillson (the "Risk Doctor") by translating his monthly risk briefings into French. He has presented at a number of recent PMI conferences and published formal papers.

Kik Piney is the author of the book *Earned Benefit Program Management, Aligning, Realizing and Sustaining Strategy*, published by CRC Press in 2018

Kik can be contacted at kik@project-benefits.com.

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