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Impact accountability in venture capital

A ready reference for practitioners

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About this document

This handbook is intended to make a practical contribution to the accountability of impact in venture capital portfolios. The venture industry is still at an early stage of understanding how best to do this. It is therefore our expectation that this document should be subject to revisions and updates as guidance becomes more refined and as standards emerge.

The contributors to this handbook are industry practitioners managing impact-focused funds. They all make receipt-of-carry partially conditional on achievement of impact and all do so using the EIF's approach based on the Gamma Model.



Contents

Foreword

Part 1: Context and methodologies

The impetus for impact-linked carry

What is the Gamma Model?

Part 2: Interpretations

Part 3: Application

Selecting impact indicators

Applying impact-linked carried interest

Governance

Case studies

Part 4: Proposals & conclusions

STEERING COMMITTEE**'The Coalition for Impact in Venture'**

Patrick Sheehan, Zoë VanderWolk

ETF PARTNERS

Till Stenzel, Simone de Bruin, Hayden Young

SET VENTURES

Eric Archambeau, Leslie Kapin

ASTANOR

Josko Bobanović

SOFINNOVA PARTNERS

Christophe Maire, Bastian Stöhr

FOODLABS

Uli Grabenwarter

THE EUROPEAN INVESTMENT FUND

Foreword



Patrick Sheehan
Managing Partner
ETF Partners

In early 2024, a group of leading European impact-driven practitioners, along with the EIF, came together to share their experiences of measuring impact in a pragmatic way, and then linking impact to carried interest. Members of this coalition ranged from early- to late-stage and growth investors, and included the EIF, as a leading proponent of impact investment. Some were 'Article 9' Impact funds and some not. What they shared was a determination to have – and demonstrate – impact, and to support others in linking impact to carried interest.

Each firm had originally developed much of its own approach and then, helped by the European Investment Fund's promotion of the 'Gamma Model', started to tie full receipt-of-carry to the achievement of impact goals.

The Model, which is more a framework than rule-based approach, seeks to provide a simple way of looking at impact and its measurement and also to distinguish the success of an investment's Theory of Change from other considerations.

It quickly became clear that there were a variety of ways the Model can be interpreted, particularly given the diversity of the group, which ranged from pre-seed to later-stage growth. At the same time, it was also clear that some of this variety may, in fact, be a sensible 'feature, not a bug'.

It also quickly became clear that the group needed a greater commonality and simplicity of language. Realising that this could be of widespread-use as interest in impact grows, the group adopted the working name 'Coalition for Impact in Venture' and decided to share the observations more widely. The outcome of this effort is in front of you.

It would be too grandiose to call this document 'a guide', but it is intended to show the commonality within, and coherence across, a collection of approaches by 'early-adopters' of impact accountability with reference to the Gamma Model. It is hoped that these commonalities move iteratively towards some simple common language (or even standardisation, once the field matures). As such, we hope what follows will be useful to all venture capital firms seeking to be intentional about impact and for those that are thinking of making receipt-of-carry conditional upon achieving impact.

I would like to thank all the members of the coalition for their dedication in bringing this document to fruition, as well as the report's authors, Ross Butler and Karen Wilson, and the report's sponsors, the EC, EIB and InvestEU Advisory Hub.

PART 1

Introduction: impact & incentive

A brief overview of what impact means – and does not mean; and a first look at some key concepts within the Gamma Model.



What impact is

Impact is a simple word that seems to generate a lot of confusion in the investment world.

In large part, this is because it is used to describe the intention of an investor (to have an impact) rather than used with its common meaning of outcome (the impact itself). It would be more accurate to call 'impact-driven investors' 'purpose-driven' or those making 'investment with intention' – typically the intention of making a positive difference in the world.

That said, 'impact' is great shorthand in everyday English and a powerful visual metaphor. To say 'she made a big impact in that meeting', is a positive and emphatic statement, for example, summoning the image of an asteroid hitting Earth (but in a good way). Since impact-driven investors typically want to make a big (even planet-sized) impact, it fits nicely.

As we will see with the Gamma model, though, clarity of words does matter.

And what impact is not...

But before we get to that, let us cover another potential confusion.

ESG is an established concept these days, and often Impact is grouped within this umbrella term or even used as if interchangeable. In fact, these are separate concepts.

ESG refers to the internal health of portfolio companies. Impact refers to the effect that company can have on people and the planet with its product or service.

*A “Theory of Change”
is simply the tangible
difference a company is
trying to make*

Our scope: Impact accountability

This handbook is very specifically about impact accountability, and impact-linked carried interest. It does not look at linking impact to any other form of compensation.

The idea of 'linking' suggests that carried interest will vary, by some mechanism, in accordance with impact. In fact, this would be a huge change for the venture and private equity industry to attempt to adopt. Our ambition, and that of the Gamma Model, is much simpler. It is to commit to provide greater impact-accountability by linking a portion of carried interest to a certain impact threshold which equates to the investment being worthwhile, from an impact perspective.

One more definition: “Theory of Change”

The term “Theory of Change” is a central concept in the Gamma Model and while it is becoming common 'impact-parlance', it deserves a clear description.

The first thing to note is (as for impact), while elegant, it can be slightly confusing in English. A “Theory of Change” is simply the tangible difference a company is trying to make. It maps out how a company plans to make an impact. Thus, if you are an impact investor, it's the rationale of why an investment is worthwhile. It's as simple as that!

The impetus for impact-linked carry

While there may be a strong correlation between financial returns and impact, the more transparently that impact can be isolated, measured, tracked and reported on, the greater will be the accountability of the venture capital and private equity industry, especially to that proportion of funding that comes from investors with an explicit impact agenda.

Success in this will also be of great interest to the many and growing roster of private-sector impact-oriented investors.

Finally, meaningful measurement provides insights that should in turn, drive greater impact, in a virtuous circle.

What is the Gamma Model?

Conceived by Uli Grabenwarter in the context of a research project conducted with IESE University of Navarra and the Family Office Circle Foundation between 2010 and 2012, the Gamma Model is a conceptual framework for fund managers to think about the impact objectives at the level of individual portfolio companies, and how to translate this into fund-level performance measures and incentives.

While our goal here is not so much to describe the model as to describe our interpretations of it, it may help to provide our reading of its main purpose and concepts.

Objectives of the Gamma Model

The Gamma Model is a way of validating an investment's Theory of Change. Its objective is to ensure investors think intentionally and specifically about this before investing, and to establish, ex-ante, what this Theory is, how it can materialise and how this could be measured. And then to actually measure and report on it, in order to demonstrate that a fund's impact objectives have been achieved alongside the fund's financial performance.

Properly applied, the question that the Gamma Model should answer upon realisation of an investment, might be as follows:

"From a purely impact perspective, would we do this deal again?"

Three "impact dimensions"

Within the Gamma Model, impact metrics or 'indicators' should fall under one (or more) of three impact dimensions.

INNOVATION | OUTREACH | SCALE

→ Innovation

Indicators within 'Impact through Innovation' relate to a novel and sustainable solution to a socially-pertinent problem (even if that solution has not yet been implemented in the real world).

→ Outreach

Indicators within 'Impact through Outreach' relate to companies applying a novel approach or application of an existing solution to an unaddressed problem. The indicators may have implications for both outreach and scale (see below).

→ Scale

Indicators within 'Impact through Scale' relate to companies that aim to demonstrate that their solution addresses a meaningful proportion of the problem in question, and does so without causing "significant collateral damage". Indicators are more likely to be closely linked to overall business success, but the objective of the metrics should still be to validate the Theory of Change.

Purpose of impact indicators

These indicators should be selected to validate the success, or otherwise of a company's Theory of Change.

Indicators can be changed during the life of an investment if the underlying activity moves from one dimension to another or if the circumstances of the business change according to elements outside its control. However, to avoid arbitrary modification of targets and dilution of the accountability for impact performance, any extension, reduction or modification of impact targets should be independently validated or internally validated by, for instance, the fund's Limited Partner Advisory Committee (see Part 3: Application).

Linking impact to carried interest

Importantly, the Gamma Model also envisages that achievement of the Impact Indicators is linked to the carried interest paid to the general partners of the fund, in order to provide for a financial commitment to deliver on an impact strategy, rather than pursuing purely financial goals.

The process for linking impact to carry as envisaged by the Model is as follows:

1. Score each portfolio investment according to its performance against a specific target based on its impact metric(s).
.....
2. Calculate the aggregated, capital-weighted impact-multiple for all companies to find the 'Fund Level Impact Multiple'.
.....
3. Carry is calculated as it normally would be, following the waterfall in the LPA.
.....
4. Apply the multiple to a pre-defined scale of carried-interest entitlement to determine how much of the carry the GP is permitted to keep.



EXAMPLE

For instance, if the same amount of money was invested in three companies and Company 1 achieved 75% of its impact target(s), Company 2 achieved 0% and Company 3 achieved 150%, this would give a Fund Level Impact Multiple of $(1 \times 0.75 + 1 \times 0 + 1 \times 1.5) / 3 = 0.75$.

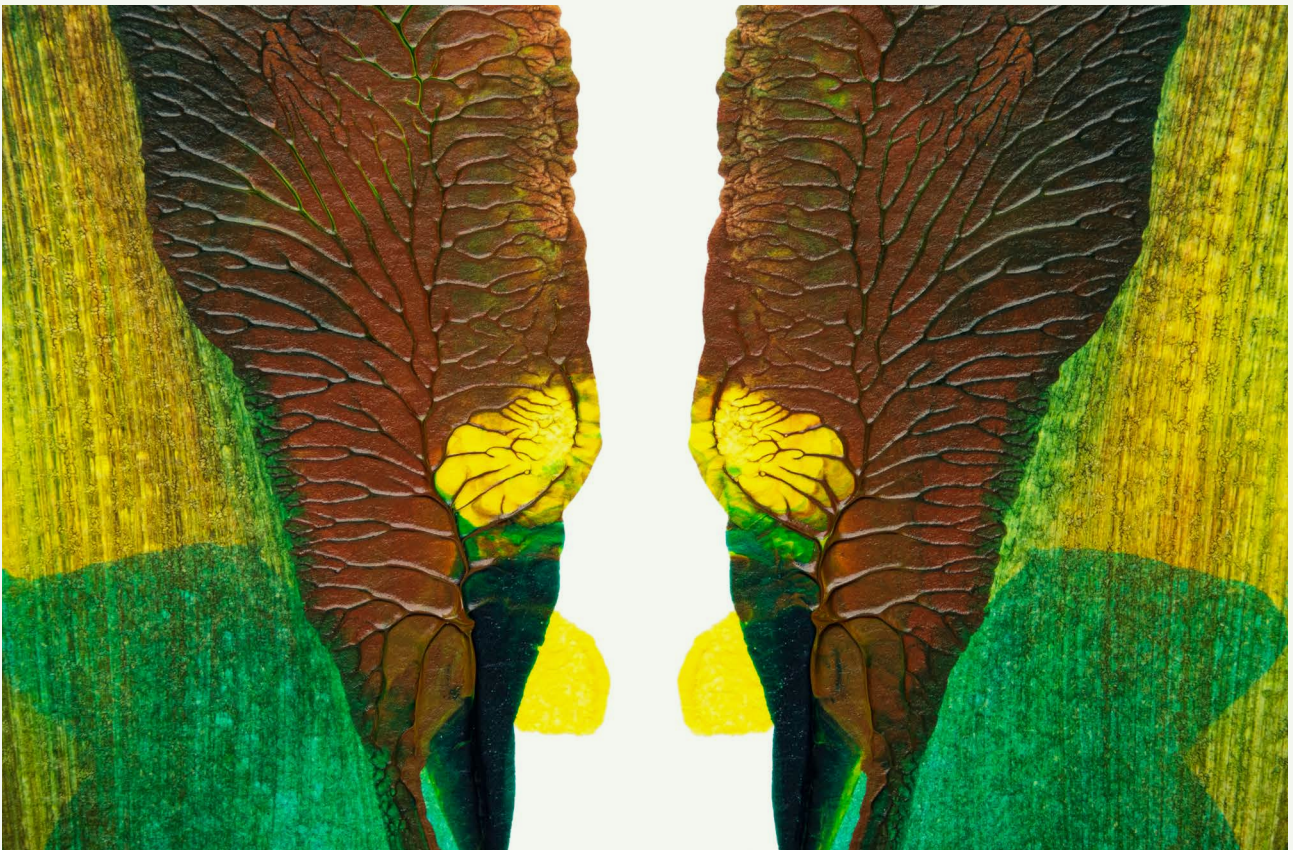
For this fund, a certain proportion of the carry is tied to impact, and the Fund Level Impact Multiple must be equal to or greater than 0.8.

In this case, the Fund Level Impact Multiple was 0.75, below the 0.8 required. Hence, there would be a pro-rata down-scaling of the relevant proportion of the carry share.

PART 2

Interpretations

How members of the Coalition for Impact in Venture have interpreted the conceptual framework of the EIF's impact-linked carry scheme.



Nowhere is there an instruction-manual or ‘cheat-sheet’ for applying the Gamma Model, perhaps partly because it is not intended as a definitive, rule-based approach, but a prompt for fund managers to interpret in ways that are meaningful to their context.

However, it may be helpful to describe some of the key terms in the Model, as we see them relating to venture investment.

What is the ‘impact’ being measured?

As described in our Introduction, unlike colloquial usage, the Gamma Model uses ‘impact’ in a way that changes depending on the context of the investment. At the very early stages of company development, impact scores can be achieved for enabling some future solution to a problem, rather than actually solving that problem directly (or happening within the investor’s holding period.) The precise nature of what ‘impact’ constitutes will be described by the company’s Theory of Change.

For more on this see “Application: Impact vs business success”.

Quantity vs Quality

The easiest way to achieve objectivity against a target is to tie it to a numerical value. The problem is that many things can only be quantified arbitrarily, and so precision is achieved at the cost of relevance. When it comes to investing in early-stage companies and assessing their potential, such exactitude becomes suspect.

The Gamma Model’s focus on a company’s Theory of Change therefore places emphasis on qualitative judgement, while leaving the door open to numerical values, where appropriate.



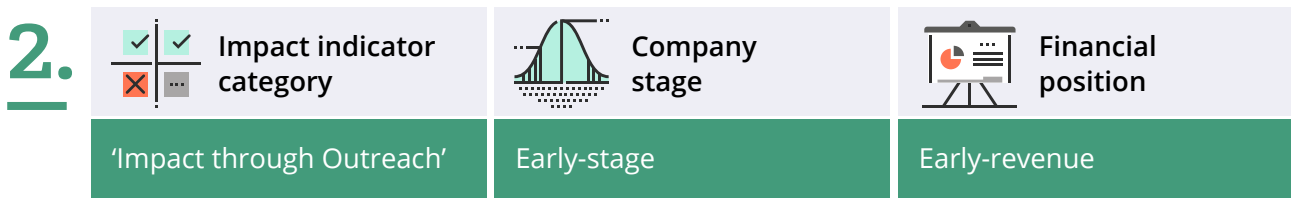
Impact dimensions in practice

The three impact dimensions envisaged by the Model – **Innovation / Outreach / Scale** – can loosely map on to stages of a company's (or products or services') development, although this is not always the case (see case studies).

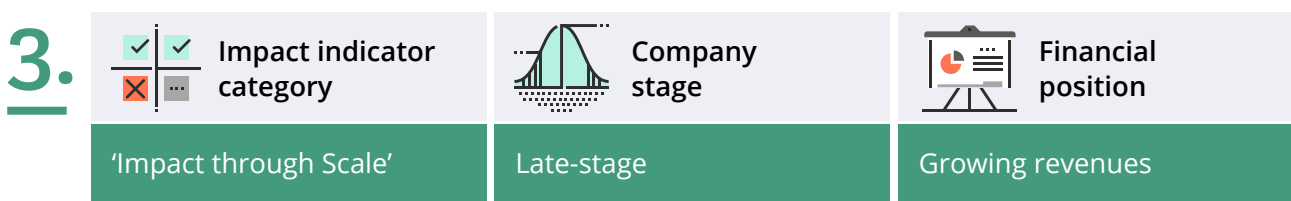


Indicators in this category are relevant to companies that are based on as-yet unproven or validated technologies.

Even for pre-seed or pilot investments, impact can be measured, for example, on the basis of some 'proof-of-intent', such as simply determining whether the solution could actually work. It may therefore be framed as a reasoned validation of a theoretical solution, but without it necessarily yet having contact with the market – or indeed the real world at all, beyond proof-of-concept. Such innovation metrics can, of course, also apply to later-stage companies that are continuing to innovate. Attention should also be given to the potential for adverse impact, as the company develops.



Indicators in this category apply to a company's engagement with the market, perhaps creating pilot customers and early-adopters, with first revenues. Since the products or services will now be in use, relevant indicators might include a 'life-cycle analysis', as a thorough starting point for assessing impact.



Indicators in this category apply to companies that are seeking to increase adoption of their solution and to make a significant impact. This stage is likely to be the most correlated with financial performance. Given the real-world impact of this category, specific attention should be given to possible negative impacts.

In addition to the dimensions, consideration to potential negative side-effects of a company's solutions and should be a general feature in any Theory of Change, regardless of dimension or stage of development.

PART 3

Application

Insights and shared experiences in the application of the Gamma Model by members of the Coalition for Impact in Venture.



1

Selecting impact indicators

Selecting the indicators to track – and the targets to reach – is the central intellectual challenge in establishing impact-linked carry.

Impact vs business performance

→ Should impact correlate with business success?

It is natural for many venture capitalists to equate impact with business success – and there is some logic in this. A company that has had a large and positive impact in the world will almost inevitably be commercially successful. And a company that cannot sustain itself cannot meaningfully be described as a ‘sustainable company’, no matter how theoretically impactful their products and services may be.

But the concern of the Gamma Model is not to ascertain the impact achieved in any absolute sense, but whether the Theory of Change – the central impact-driven concept on which an investment was made – has been validated, in relation to the company’s stage of development.

The more developed the business, the closer those impact indicators are likely to correlate with commercial success. But this does not have to be the case, and for early-stage companies, it might be preferable if it were not the case. In this way, a venture investor can be judged on its ability to select companies on the basis of their success in materialising an impact agenda, as distinct from building a fully-viable commercial operation through which to prosecute such an agenda.

This speaks to the essential USP of the Gamma Model: it allows venture investors to translate net-positive impact into actual value – an ability that is essential for impact investors and highly interesting for anyone with impact-linked ambitions!

Targets and hurdles

→ How ambitious should impact targets be?

The natural inclination of venture capitalists to set themselves and their companies very high bars is, perhaps, not entirely applicable when it comes to impact indicators. This is for several reasons.

First of all, it is hard enough to achieve traditional carry by creating commercially sustainable businesses. The creation of a ‘second hurdle’ could, perversely, act as a disincentive to risk-taking impact-driven investment – and this is not the intention of the Gamma Model.

Secondly, the central concern of the Model is to validate the Theory of Change. Therefore, rather than shooting for an ambitious, maximal-impact target, this goal might be better achieved by setting a ‘minimal viable impact’ level – the point at which, from an impact perspective, the Theory of Change has been established; not the point at which it becomes an impact ‘home-run’.

However, there may be venture firms with such a zeal for outperformance that they cannot suffer mediocrity in any dimension 😊. As such, there may continue to be differing interpretations on this point.



But is it a hurdle?

Whether impact targets constitute a hurdle is somewhat semantic but deserves closer attention.

The Gamma Model posits that the targets are not hurdles but qualitative measures against a Theory of Change. This means that a true impact investor will not fail to achieve its impact targets, if an impactful strategy has been pursued – regardless of the financial success of the investment. At the same time, if the investor is a true impact investor, it will not meet its financial carry hurdle without validating the Theory of Change. To do so would mean it has created the value through some form of impact-free financial engineering and definitionally falls outside the world of impact funds.

In other words, impact targets are an expression of the commitment of the fund manager to achieve a fund's financial performance through an impact-driven investment strategy.

A related point is that impact-linked targets are not just hurdles, they are also ceilings, since they are dependent upon economic carry. In other words, you can set impact-linked carry at any level of overall carry, but not above 100%! As mentioned previously, this is not a bonus system for outperformance but a validation system for the Theory of Change.

What should be the time-period for indicator targets?

The appropriate time frame for setting impact indicator targets depends on whether the goal is to validate the Theory of Change or to capture longer-term impact value.

→ Holding period only:

The consensus is that indicators used to validate the Theory of Change should generally be measured within the investor's holding period. A 3–5 year period is typical for validation, though it may be extended for companies that need more time to validate their Theory of Change. This timeframe influences indicator selection, focusing on those an investor can realistically impact within this period. This approach aligns with a "minimal viable impact" target-setting strategy.

→ Longer-term impact:

Some investors may choose to track impact value creation beyond the holding period. In this case, the objective shifts from validating the Theory of Change to measuring impact potential post-exit, fostering a long-term perspective on impact goals and allowing recognition of impact that may take years to develop. While attractive – especially for assessing an innovation's future impact – this approach presents challenges, such as linking impact to financial carry and appropriately attributing value creation.

→ Cumulative targets

Another approach would be to have cumulative targets, which seem to be more common among the steering group. Given the uncertainties around early-stage companies, many feel that it matters little if an impact target is met in the third year rather than the second, and this would also align with the J-curve approach to traditional venture capital investing.

Intermittent reporting

Whatever the time element attached to impact-linked carry, most investors undertake to report periodically on progress towards these goals. This will support transparency around impact in a similar way that investors would expect regular updates around financial progress. Such reports may conform to the general cadence of broader corporate reporting – such as for those firms that publish an annual impact report – and help keep things on track. It will also help to funnel the indicators through the dimensions, as they become increasingly ‘concrete’ and close to the real-world impact. Finally, such intermittent reporting may be helpful if an investor chooses to exit its investment prior to realising the full Theory of Change.

Who should be involved in setting indicators and targets?

There are several schools of thought with regards to the governance around indicators and targets.

→ **Manager-led, with oversight bodies**

In this instance, the venture capital managers set their own indicators and target levels, as part of discussions with the company management team, to ensure alignment on targets and meaningfulness of measures. This approach is logical insofar as the purpose of the Model is to validate a company’s Theory of Change from the perspective of the manager. It would therefore be strange for third parties to be involved in their formulation. It also seems concordant with the perspective that targets should be based on a ‘minimal viable impact’, rather than ambitious hurdles, since the latter would present obvious conflicts of interest for this approach. To ensure good governance, the targets would then be discussed and approved by an oversight body, such as an LPAC.

→ **Investor input**

While there have been instances of enthusiastic limited partners wanting to be involved in the setting of impact targets, in addition to the objections above, this also poses serious liability issues in many jurisdictions. The risk of such ‘shadow-management’ is highest for funds where impact forms a central part of the investment strategy.

→ **External independent experts**

The use of third-party experts brings the obvious benefit of impartiality, and is, perhaps, more necessary when targets are conceived as ambitious. However, unlike in accounting and audit, the abstract and subjective nature of any Theory of Change means that input from outsiders, no matter how well-informed they may be in general, risks being arbitrary. It is of course also an extra cost for the fund.

How to manage targets in an investor consortium as a start-up matures

While it may be legitimate for different investors to have different impact indicators for the same company, it is considered good practice for fellow shareholders to attempt to align on this, in order to land upon metrics that are meaningful for the company and to not unduly add to its reporting burden.

Of course, in venture, investors are often not joining the business at the same time or stage of their growth. Given the rapid development of venture-backed businesses, the metrics set by seed investors will necessarily be different from those that enter at a later stage, but there could still be coherence or complementarity between them, as metrics are ‘built-upon’. If the metrics are set so that the company managers want to use them to manage the company’s impact, this is considered an achievable goal in many cases.

Adjustments to metrics and targets

The Gamma Model allows for changes to impact indicators if a) the underlying activity moves from one impact dimension to another and b) if factors outside the company's control require a reframing of its Theory of Change.

This leaves the question as to whether a Theory of Change can be proactively altered – not by growth or force-majeure but by agile, opportunistic footwork by entrepreneurs or venture firms. As currently conceived, the Model leans towards consistency rather than agility.

However, too great a rigidity would be impractical, particularly for very early stage and pre-seed companies.

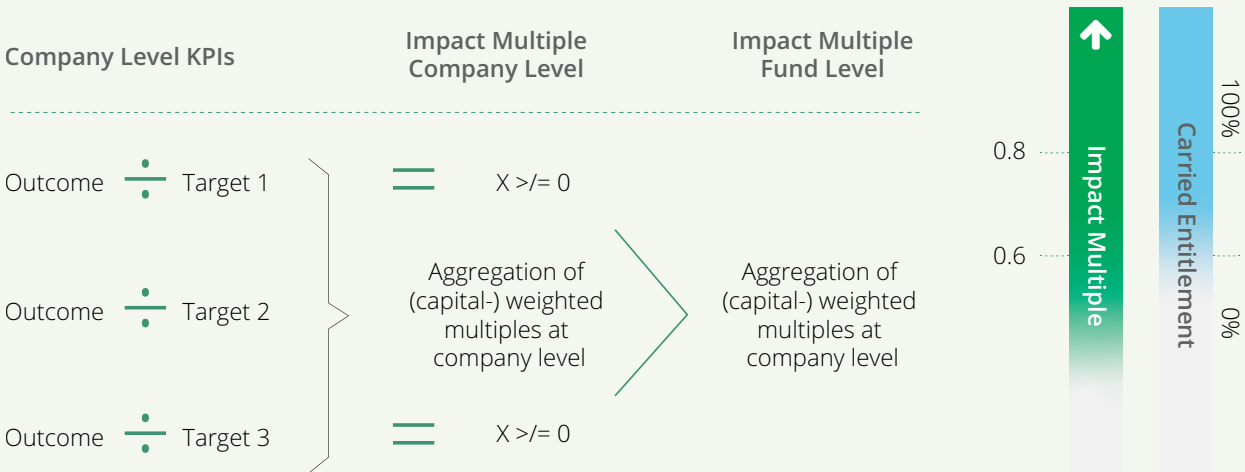
In such cases, members of the steering group have attempted to define a 'north-star' or direction of travel with regards to impact ambitions and metrics, that become ever more refined and sophisticated as the company develops. This will also happen naturally as new investors join the business in later funding rounds, bringing with them their own metrics, which may differ from those of existing shareholders, but would, ideally, still be part of a coherent continuum.

2 Applying impact-linked carried interest

Capital-weighting formula... flexibility required

In order to derive a Fund Level Impact Multiple from the performance of individual portfolio companies (a requirement for linking it to carried interest) the Gamma Model proposes that the outcome is divided by the target level.

Impact Performance and Carry





A met target would equal 1 or above (!), while 50%-met would equal 0.5. These scores are then weighted by the capital in each company and averaged to find the Fund Level Impact Multiple, which then links to carry.

However, a rigid interpretation of this formula could be prejudicial to early-stage companies...

→ The early-stage equation

A scale-up could, of course, over-achieve on its targets and so could score above 1. But in the early stage, where impact indicators are more likely to be binary (e.g. "Have we proven this technology is theoretically viable?") – the outcome will be capped at 1.

This is particularly challenging since, at the early stages, the likelihood of many zeros across the portfolio will be higher too (although, it should be noted that this outcome is not as extreme as it first appears, given the ability to disconnect business success from impact success.)

There is also the question of how to prove the viability of the technology itself. In drug development indeed this may be binary because you can't half-pass a clinical trial. In other cases, proof of technology may translate into a variety of market-facing developments that could result in scores above 1.

We suggest that the weighting of outcomes is, in some way, qualitative or adjustable (perhaps in terms of the impact multiple vs carry entitlement scale on the right-hand side) in a way that levels the playing field and gives appropriate credit to impact outliers. (Which is, after all, the venture capital calculus). Such a qualitative approach also appears to conform to the spirit of the Gamma Model.

What happens to unearned carry?

No common standard has yet emerged for what happens to diverted impact-linked carry.

However, handing back the capital to limited partners would create false incentives and is deemed inadvisable.

Most members of the Steering Group intend to donate the money to a relevant charity. The portion of the carry thus donated has a positive "impact" somewhat compensatory to the impact underachievement rather than simply increasing LPs' financial returns.



3

Governance of impact-linked carry

→ LPA or side-letter?

Whether a venture firm chooses to include the impact-linked carry within its full limited partnership agreement with all investors, or to include it only in a side-letter, as a bi-lateral agreement with the most enthusiastic impact-oriented investors, will differ.

Writing the structure into an LPA has the benefit of clarity and simplicity, but it may not be attractive to all investors – particularly for those funds that are not Article 9 – and could even deter some from the asset class – which would not encourage support for venture capital.

Some members of the steering group apply the Gamma Model to a minimum proportion of their portfolio (for example, 70% of investments), neatly allowing the combination of impact with non-impact investments in the same fund.

→ Who should be involved in assessing achievements to targets?

Similar to the setting of indicators, there is a spectrum of options from formal independent committees, external independent advisers, or manager-led.

The simplest approach is probably a manager-led assessment with reference to an investor advisory committee from the wider LP base. This could be the existing LPAC or a sub-set of it, or even an entirely different advisory committee of impact-focused LPs. This will ensure all investors stay informed with regards to matters that could affect the incentive of the team, while providing a level of accountability.

However, these engagements should be ‘for information only’. Caution should be exercised in allowing LPs to make decisions that could present them as shadow managers and thus potentially expose them to liability. However, so long as the influence of LPs is on an approval basis only, without authority to set targets, this risk can be mitigated.

Case Studies



Electrifying opinions in favour of EVs

e-Mobilio is a German digital platform that helps drivers transition to electric vehicles. SET Ventures backed the company as part of its goal to accelerate the transition towards a carbon-free energy system. The investor chose to validate the company's Theory of Change across two dimensions, using both qualitative and quantitative metrics.



Company: e-Mobilio

Investor: SET Ventures

Context: The customer journey to adopt an electric vehicle is fundamentally different to a petrol car. With various headwinds impacting EV sales in Germany, e-Mobilio's solution reduces the complexity and simplifies the decision to choose an electric vehicle, therefore contributing to faster market adoption and ultimately climate protection goals.

Approach: SET Ventures validated the Theory of Change using indicators that spanned Outreach and Scale dimensions. It includes both quantitative and qualitative metrics and both have specific goals that must be met within 3 years. All metrics are correlated with commercial success but not all equate to 'hard sales'.

Stage: Impact through **Outreach / Scale**

Indicators: Number of customer interactions / CO₂ emission savings generated across the platform

What was the investment's Theory of Change?

e-mobilio provides the information and product offerings to customers to make informed choices about transitioning into the electric vehicle ecosystem. Its complete software-based advisory platform and fulfilment solution covers the entire electric mobility ecosystem from identifying the right electric vehicle to choosing and implementing the right ancillary products such as wallboxes or charging cards.

This removes the information and implementation barrier to EV adoption, accelerating market roll-out and, in the process, decreasing the sector's carbon emissions. The company's mission has become all the more urgent since sales of EVs began to drop in Germany early 2024, due to changed market regulatory environment.

How was the Gamma Model applied?

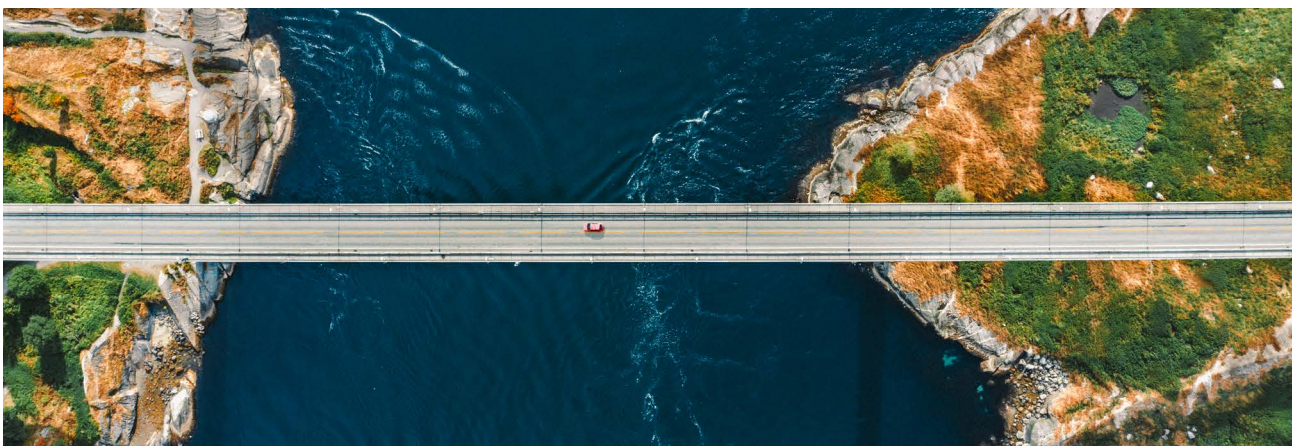
In order to validate the company's Theory of Change, SET Ventures monitors two indicators, an educational KPI (outreach) and a CO₂ Impact (scale) KPI.

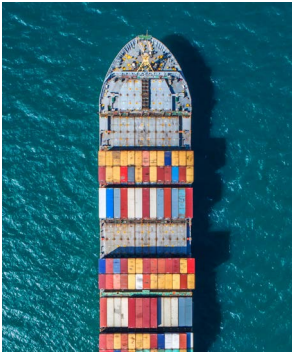
The company's Outreach Indicator is the number of consultations or 'educational interactions', encompassing a number of metrics among which sales-person engagements, sales tool interactions, GHG quotas and measurable product interest which are all tracked. Though not all interactions result in EV purchases, they do give a measurable indication of the potential outreach of the solution.

The company's Scale indicator is to track influenced EV purchase decisions and the sales of add-on services, such as wallboxes. These numbers are then modelled against market data to come to an annual CO₂ emissions reduction impact.

Outcomes and observations

Despite the slow-down in the EV market in Germany, the company had already hit half a million consultations at the time of writing, already exceeding the full-year target for 2024.





An intelligent way to reduce maritime emissions

Shipping is often quoted as being a hard to abate sector, yet a Greek technology startup enables significant reductions in emissions, using advanced AI algorithms and maritime data. The benefits are achieved rapidly and in a capital-efficient way. ETF Partners measured DeepSea's huge potential impact with a single, elegant metric.

Company: DeepSea Technologies

Investor: ETF Partners

Context: Shipping is a major contributor to global emissions and many proposed solutions (e.g. retrofitting and alternative fuels) are costly, unproven and not market-ready. DeepSea's AI-based solution actually saves carriers money immediately, by reducing fuel consumption. This directly reduces CO₂ and so Deepsea's method of charting efficient voyages based on actual operating conditions has a huge potential impact on global carbon emissions.

Approach: ETF Partners elected to use a single metric that was central to the company's commercial success as well as its environmental impact, with a targeted goal based on a 'minimum viable impact'.

Stage: Impact through **Scale**

Metric: Kilometres tracked to reduce fuel consumption and emissions.

Quantifiable target: 30 million kilometres.

What was the investment's Theory of Change?

The shipping industry, which carries around 80% of the world's trade, is responsible for 3% of global GHG emissions, which is equivalent to the total emissions of the continent of South America. However, the estimated cost for decarbonising the global fleet and transitioning to clean fuel sources is considered prohibitive: estimated to be between \$8bn and \$28bn annually, plus the additional need for up to \$90bn in carbon neutral fuel infrastructure. This would have a major impact on the price of goods across the world. Sustainable solutions that can be deployed today are desperately needed that will both help to reduce cost and emissions, quickly.

DeepSea's state-of-the-art technology has the potential to transform the maritime industry by optimising the routing of ships through using AI to manipulate large amounts of vessel data (performance, loading, etc.) and operational data (weather, currents, port availability, etc). In fact, DeepSea's AI was able to reduce fuel consumption on average voyages by more than 10%. Such an improvement in efficiency, if used across large vessels globally, would have a material impact on global GHG emissions – and this could happen quickly.

How was the Gamma Model applied?

ETF Partners chose a single metric because it was simple and relevant for DeepSea to measure and was easy to understand – the number of kilometres tracked using DeepSea technology. It then set a target of 30 million kilometres, which was selected as the 'minimum viable impact' that would demonstrate that the investment was making a difference in global carbon emissions.

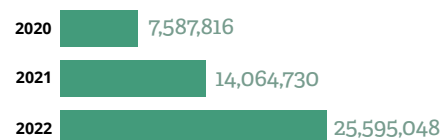
ETF Partners' investment goal was to prove the adoption and commercial viability of DeepSea's technology. Given that shipping owners are generally concerned with their costs rather than emissions, the potential environmental impact of the business was highly correlated with its commercial attractiveness. The investor also wanted to capture impact both from new customers and increasing usage from existing customers.

Outcomes and observations

The investment was realised through a successful sale to a Japanese corporation, Nabtesco within three years. This was a clear validation of the company's commercial appeal and also of the large potential impact of its technology. However, because it happened more quickly than had been anticipated at the time of the original investment the company had not yet fully hit its original 'minimum viable impact' target. This poses some questions around how carried-interest linked impact targets should work as circumstances change, particularly over shorter timeframes.

Impact KPI tracked

Km tracked per year to reduce GHGs
in KM (not cumulative)



Protein with the power to change the world

When FoodLabs backed MicroHarvest it was little more than a concept. But its technology had huge environmental implications, given its promise of replacing environmental-harmful protein sources with alternatives derived from biomass. A CO₂ based quantitative indicator was initially selected, that set a 'north star' direction for the business at a very early-stage of its development, and which has subsequently been built on and refined as the company has grown.

🏢 Company: MicroHarvest

📁 Investor: FoodLabs

⚙️ Context: Traditional protein production is inefficient and environmentally-intensive. MicroHarvest has found a way to produce nutritious biomass at scale from fast-growing bacteria, with applications across the whole protein value chain. FoodLabs, an impact investor, backed the company at pre-seed stage.

📌 Approach: FoodLabs initially formulated qualitative targets for the incubated business, but also identified numerical targets using expected CO₂ reduction relative to traditional methods as a proxy. The investor devised the targets, acknowledging the early stage of the company, setting the overall direction for the company in development.

🔗 Stage: Impact through **Innovation**

🔍 Indicator: CO₂ impact

🎯 Quantifiable target: Reduce CO₂ emissions by several mt by 2030

What was the investment's Theory of Change?

Producing high-quality protein is expensive and environmentally-intensive. Around 15% of GHG emissions are from livestock, the majority of which comes from their food consumption. In fact, half the world's cropland is for animal feed, making it a primary driver of biodiversity loss. In addition, pets eat about a fifth of the world's meat and fish.

Hamburg-based MicroHarvest's technology enables local and decentralised single-cell protein production using bacteria that is high in micronutrients. This is achieved with a patented biomass fermentation process.

How was the Gamma Model applied?

When FoodLabs first invested in MicroHarvest, the company had just a concept and one team member. Too early for any quantitative analysis of company specific data, the company instead formulated a 'north star' impact goal around reducing relative CO₂ emissions, starting with the founders business plan and with reference to available benchmarks. While its products have many other environmental benefits, at the time, this was seen as the simplest and most accessible metric for the business at the earliest stages.

Numerical targets were assigned based on very broad estimates, around tonnes of carbon avoided. FoodLabs developed an annual target roadmap, but with a cumulative target (so only the final outcomes matters for carry purposes), culminating in a target of a several million tonne reduction in CO₂ by 2030.

One limiting factor in this calculation was the availability of reliable benchmarking data on the relevant alternatives (in this case, initially, the emissions from soy production, the most sustainable alternative protein source used at scale in the

market at that point in time) which was subsequently complemented by an LCA.

While FoodLabs typically avoids linking impact targets to financial performance given the inherent uncertainty in any financial projections, in this instance, carbon abatement closely maps the company's commercial success, which was seen by FoodLabs and the entrepreneur as a satisfactory proxy at that time.

Outcomes and observations

Within its first year, MicroHarvest had scaled from lab to production of 100 kg per week, without using any farmland. It now serves the whole protein value chain, from animal feed and pet food to human food production.

Given the company's rapid development, it has subsequently built out its impact measurements to cover an LCA and other environmental benefits such as biodiversity (including marine) and water usage.

The insights provided by the LCA not only allow for quantification of meaningful impact in the existing process, but also provide a framework for measuring future innovations in the production process.

Since then, additional VCs have subsequently joined the company's share register, bringing with them their own impact indicators and targets for the business.

FoodLabs' decision to use CO₂ as a starting point measure was a result of the availability of a relatively robust business plan despite the very early-stage of the business, as well as strong third-party benchmarks. Had this not been the case, the firm would have more probably opted for a feasibility-based innovation indicator.



Pond-to-plate: shaping the future of food

Astanor's triple impact metrics follow Plantible's evolution from environmental credentials, scalability and viability, through to full-commercial production that is set to improve the sustainability – and nutritional content – of everyday food.

Company: Plantible

Investor: Astanor

Context: Plantible has developed a method to extract a natural protein from lemna (duckweed), an aquatic superplant, offering a healthy, nutritious, sustainable and regenerative alternative to intensively produced egg whites and many other food applications. Astanor, a dedicated agrifood tech impact investor, invested in Plantible at the early-stage Series A round.

Approach: Astanor selected impact indicators across all three 'Impact Dimensions', covering Innovation, Scale and Outreach. The indicators are uncorrelated with the business plan, in order to validate the Theory of Change.

Stage: Impact through **Innovation / Scalability / Outreach**

Indicators: Life-cycle analysis / Production model / Commercial adoption.

Quantifiable targets: LCA validation / Production validation / Sign >3 commercial partners.

What was the investment's Theory of Change?

Replacing animal products and synthetic ingredients in the food-chain has wide-ranging benefits including reduced emissions, lower water usage, improved health, increased biodiversity and improved animal welfare. Plantible has developed a scalable manufacturing technology for producing and extracting a natural non-allergenic protein that contains all nine essential amino acids. It is, for example, an excellent substitute for egg whites – a ubiquitous ingredient in packaged foods.

The company's solution is regenerative and sustainable, humane and nutritious.

How was the Gamma Model applied?

Indicator 1 – Innovation: To validate innovation, Astanor prioritises the completion of a comprehensive successful environmental life-cycle analysis (LCA) for the product, demonstrating its advantages over existing market alternatives. This process is considered a crucial step in understanding a company's environmental impact across various indicators. The results can then be compared with the environmental footprint of the replaced products to determine improvements across metrics such as CO₂ reduction and land-use efficiency.

Indicator 2 – Scalability: Astanor aims to validate the ability of Plantible to deliver their solution at scale. To measure success, the second KPI is about getting the approval from an external consultant that the company has found the right set-up to scale its production model.

Indicator 3 – Outreach: Its third indicator is to demonstrate adoption by large commercial partners with the target being set at three validated large commercial partners.

Outcomes and observations

The company's LCA has been successfully completed, providing an objective quantification of the company's impact and, additionally, providing insight into additional environmental improvements in the company's processes in future.

At the time of writing, the company is in the scale-up phase, deploying its technique in large ponds that currently use just 0.5 sqm of land to produce 1 kg of protein against almost 100 sqm for its egg white equivalent.

Finally, Plantible is in the process of outreach to major packaged foods producers to replace environmentally-intensive food application with its regenerative alternative.

Impact KPIs	Metric used	Plantible vs. egg white
GHG	kg of CO ₂ e emissions avoided	-72%
Biodiversity	Land use in sqm	-99%

How algae can crack concrete-problems

To measure the impact of Prometheus Materials' nature-inspired algae-based concrete, Sofinnova adopted several measures that are relevant to an early-stage company.



🏢 Company: Prometheus Materials

📁 Investor: Sofinnova Partners

⚙️ Context: Prometheus is seeking to scale a proprietary technique to replace traditional emissions-intensive concrete production with a novel alternative that harnesses natural algae. If successful, it will revolutionise the construction industry while reducing emissions.

🔍 Approach: Sofinnova used three metrics for Prometheus, relating to a validation of its life-cycle analysis, commercial adoption and monitoring of potential negative impacts.

🚀 Stage: Impact through Innovation / Scalability / Outreach

🔍 Indicator: CO₂ emissions reduced relative to Portland cement / Sales/commercial adoption / negative-impact analysis.

🎯 Targets: Reduction in CO₂ relative to traditional concrete / Adoption rate / No negative impacts

What was the investment's Theory of Change?

Concrete is the most widely used solid material on the planet. Its key ingredient, cement, accounts for nearly 10% of GHG emissions.

Inspired by nature's carbonaceous materials, Prometheus Materials is developing a biological alternative made by natural photosynthetic algae that require CO₂ as biomass feedstock. As a replacement for concrete, the company's CO₂-negative material has the potential to decarbonise the construction industry and make a major impact on global emissions.



How was the Gamma Model applied?

Sofinnova applied three metrics to Prometheus, across all three 'Impact Dimensions'.

Within 'Impact through Innovation', the target is a reduction in CO₂ emissions relative to Portland cement-based concrete. This requires a full life-cycle analysis to ascertain the amount of CO₂ produced versus that consumed in the making of the bio-concrete.

The second metric relating to 'Impact through Outreach' is commercial adoption of the product. As a series A investor, Sofinnova was taking a 'leap of faith' that the technology would scale. Adoption was therefore a relevant 'scale' metric to show the product was cost-competitive.

The third metric, within 'Impact through Scale' was an analysis of potential negative impacts, to ensure, for instance, that no environmentally harmful substances are used.

The target levels were informed by the company's business plan and, like the business plan, were set to be ambitious but achievable.

Outcomes and observations

At the time of writing the company has met or exceeded its LCA-related CO₂ targets. As an early-stage company, it is still working on its market-adoption goals, although it has met several milestones, including the construction of industrial photo-bio-reactors and a production facility for finished products. No negative substances or practices have been detected.



Transforming Spain's approach to community healthcare

When Creas invested in Qida, it had ambitious plans to keep many more elderly and sick people out of hospital by providing high quality carers. As it has grown, so has the sophistication of its impact measurement.

Company: Qida

Investor: Creas

Context: Qida is changing the way healthcare is conceived in Spain by facilitating higher quality at-home care, and by raising the social status of the carers.

Approach: Creas initially set Scalability and Outreach targets across 4 metrics. It later introduced an Innovation-based metric as the company grew and developed novel measurement techniques.

Stage: Impact through Innovation / Scalability / Outreach

Indicators: Number of new healthcare plans / Salary % above minimum wage / Perception of quality / Number of re-admissions avoided

Targets: Year 4: 27,512 plans / 5.6% above minimum wage commercial partners.

What was the investment's Theory of Change?

Spain's ageing population is placing great strain on the country's healthcare system. Hospitalisation often leads to additional health complications and is best avoided where possible, while loneliness is endemic among elderly people at home.

On the supplier side, the social status of care-givers is low, with more than 40% in irregular employment and more than 90% are paid at, or less than, the minimum interprofessional wage.

Qida provides an online and physical homecare platform that allows families to find the ideal caregiver and formulate an expert plan based on the specific person's needs and context. Qida operates a rigorous selection process of caregivers and offers them training and a salary that is meaningfully above the minimum wage.

Creas invested at a very-early stage, as it saw potential to improve the lives of patients, to significantly improve the social status and satisfaction of care-givers and, most ambitiously, to change attitudes to towards care in Spain.

How was the Gamma Model applied?

Four Impact Indicators were initially selected – two relating to the impact on the quality of life of patients (the number of new expert plans and the perception of the quality of care by the family) and two to the social status of caregivers (percentage salary above the minimum wage and the perceived improvement in their social status).

In addition, as the company demonstrated it was capable of delivering a systemic change in terms of the quality of care and the way home-based care is conceived in Spain, the investors devised a way to measure an additional Indicator: the number of

hospital re-admissions avoided. This Impact Indicator shows the potential of the model to alleviate the pressure on the country's health system at-large.

Creas sets annual targets for the first three years and then the year of exit, while the Indicators are measured and reported on each quarter.

Outcomes and observations

Creas believes the Impact targets must closely align with the business plan and be core to its mission, or else risk becoming general 'CSR'. In order to ascertain the correct metrics, the firm surveyed care-givers with a long list of questions in order to prioritise social status. Wages were the chief concern and thus also became a key impact target and is also considered to be a crucial business-success metric.

However, during the holding period, the Spanish government made five changes to the national minimum wage, resulting in a 14% increase from the baseline that was used for the first Indicator around wages. Following these changes, in 2024, Creas's supervisory board approved a new target that reduced the proportion above the minimum but increased the nominal euro amount to significantly above the original target level. The smoothed average over the holding period is 5.3% above the minimum wage.

The Scale targets were originally set based on highly ambitious hockey-stick projections. As a result, despite very strong growth, these may prove difficult to meet.

Scaling opportunities in the labour market

La Varappe has grown from a small regional NGO to having a profound impact on the French labour market. Phi Trust helped to establish a business model with a high inherent social impact, and supported the professionalisation of the business.



Company: La Varappe

Investor: Phitrust

Context: Formerly an NGO, La Varappe became for-profit with seed investment from Phi Trust to ramp up its efforts placing people in social and professional difficulty into employment across France. As a social enterprise, the Impact Indicators and the company's own success metrics are very closely aligned.

Approach: Phitrust's Impact Targets focused on the company's core ambition of increasing the scale and outreach of employment placements. This has been achieved by professionalising the business and a buy-and-build strategy.

Stage: Impact through **Innovation / Scalability / Outreach**

Indicators: Jobs offered / People trained / Increase in employability / Decrease in unemployment

What was the investment's Theory of Change?

Access to the labour market is crucial for individuals at risk of social exclusion. Under France's *Entreprise d'Insertion*, the State funds employment of individuals for two years, after which they must be fully independent.

During this period, La Varappe, a company dedicated to social inclusion, provides employment opportunities in sectors including construction and public works, waste treatment, health, maintenance of green spaces and renewable energy. It also provides social assistance and training to ensure individuals are able to exit the programme and find employment at the end of this period.

How was the Gamma Model applied?

PhiTrust set Impact Indicators that were core to the business's *raison d'être*: job opportunities offered; number of people trained; number of people employed and the positive exit ratio. This also meant that its impact measurements were also used by the business for day-to-day monitoring.

The company has a high success rate in successful exits of their candidates, of around 70%, depending on the wider economic backdrop.

In addition to these core metrics, the investors added the amount of rubbish collected, as the circular economy has become core to employment opportunities during the two interim period.

Outcomes and observations

A social investment, La Varappe has been highly successful both from a commercial and impact perspective. Today's its turnover is more than €100m, compared to the €3m or so NGO that originally approached investors for grant money.

The company has also grown through acquisition, which has provided a boost to the achievement of Impact targets.

In 2023, it placed 1,781 individuals into full-time and temporary work, compared to 930 five year earlier. Its exit-success rate of individuals in the scheme has varied over five years between 67% and 81%, which includes the Covid period and subsequent economic slowdown.



PART 4

Proposals and conclusions

The summary of the various approaches to applying the Gamma Model in the chapters above constitute a 'state-of-the-art' insight. Rather than attempt to draw hard-and-fast conclusions at this stage, we make some tentative observations in the hope of prompting wider discussion and further substantive progress in the future.



When is impact not impactful?

As mentioned in our Introduction, 'impact' is a loaded word – one that is used both in everyday English and to describe a specific sub-asset-class... and much in between!

Confusingly enough, in the context of impact-link carry, the word bears little relation to the everyday meaning of 'having an effect in the world'. Instead, it refers to a disposition further back on the chain of causality: intentionality and purpose.

This is an important distinction.

The Gamma Model does not seek to measure or reward purely on the basis of real-world impact, but specifically against a stated purpose – or Theory of Change –which, depending on the stage of a company's development, may have nothing at all to do with affecting the world beyond its R&D labs.

In a similar way, to native English-speakers, the Theory of Change is a misleading term, since it equates so little to the use of the word 'theory' in common parlance.

While this document has attempted to shed some light on the process, it might be helpful to reconsider some of the vocabulary used by practitioners in this context, to see if we can formulate an unambiguous, simple and shared articulation of the process behind impact-linked carry.

Ex-ante vs ex-post

The entrepreneurial experience and reality of investment is that, inevitably, plans change. This seems to go against the Gamma Model's concept of identifying, ex-ante, a company's Theory of Change, and identifying specific indicators to judge its success.

The model does allow for indicators to be updated in certain circumstances, but the conceptual framework is one that assumes pre-conceived theories, rather than beginning with a spirit of experimentation in the hope they will give rise to such theories.

There may be utility for venture capitalists, who may typically prefer to be non-committal, to form the discipline of articulating such theories ex-ante. But there does seem to be merit in providing for flexibility in the meeting of targets, as in, for instance, where a break-through technology saves the world, just not in the way the company's Theory had initially envisaged; or where an impact-oriented VC identified ways to make a company more impactful, such as by suggesting a new solution that the company could introduce.



Multiple investors, one (small) company

An open question is how to manage a situation where a single company has multiple investors, all with their own impact indicators and targets. Some investor consortia can be quite large, so this problem is more than theoretical. Some consideration should be given to the burden on the company in this context and pragmatic ways to coordinate, streamline or otherwise accommodate divergent approaches to the same company.

Negative impact or the problem of “collateral damage”

As companies develop and engage with the outside world, their impact becomes tangible and serious. For this reason, in the ‘Innovation’ dimension, the Gamma Model specifically references solving problems “in a sustainable way without significant collateral damage.”

This points towards the corollary of less responsible modes of innovation, such as that encapsulated in the ‘move fast and break things’ mantra. To give such an ethos a fair hearing, the entire scientific endeavour is based on the perhaps unlikely faith (in the age of the atom bomb) that such experimentation is, in the final equation, good for humanity. Given the inherent uncertainty of early-stage innovation, such blind-faith optimism is not only justified but perhaps are pre-requisite.

On the other hand, for an exercise overtly concerned with impact, at least equal weight should be given to the potential negative impact of a technology, and this is the expectation within each dimension of the Gamma of the model.

For investors, this will also be an exercise in judgement. For instance, what constitutes ‘significant’ damage? And given the unknowability of such outcomes, what level of confidence should be applied? And more practically (to reverse the example in the previous chapter) if all your investments

hit their impact targets, but one creates an uncontrollable green slime that smothers the earth, do you still collect your impact-linked carry?

(The EU taxonomy also attempts to cover this in its ‘do not significantly harm’ concept, although this only applies to Article 9 funds that are aligned with the taxonomy. In addition, a taxonomy is by definition a static classification system and therefore not particularly well-suited to the task.)

This may merit further examination.

On impact-linked carry

The ambition and challenge of linking impact to carried interest should not be underestimated. Incentives are key to any business and their correct alignment has been one of the major factors behind the success of the venture capital industry in general.

As a first step, the Gamma Model seeks only to tie impact to carry, rather than wider compensation, and to do so only on the downside. This proves to be complex enough.

While standardisation is, in theory, desirable, for the efficiencies and certainty it can provide, it should not be rushed but forged through experimentation in the market. By sharing knowledge of early-adopters, our hope is that we can cautiously move towards structures and practices that make sense for venture firms and all their stakeholders.

Consideration should be given to the burden on the company and ways to coordinate and streamline metrics...

