



# BEYOND CONNECTIVITY

Leveraging Digital Innovation for SDGs 1 & 10

As a federally owned enterprise, GIZ supports the German Government in achieving its objectives in the field of international cooperation for sustainable development.

**Published by:**  
Deutsche Gesellschaft für  
Internationale Zusammenarbeit (GIZ) GmbH

**Registered offices**  
Bonn and Eschborn

**Address**  
Friedrich-Ebert-Allee 36 + 40  
53113 Bonn, Germany  
T +49 228 44 60-0  
F +49 228 44 60-17 66

Dag-Hammarskjöld-Weg 1 - 5  
65760 Eschborn, Germany  
T +49 61 96 79-0  
F +49 61 96 79-11 15

E [info@giz.de](mailto:info@giz.de)  
I [www.giz.de](http://www.giz.de)

**Authors:**  
Jütting, M., Blumrich, F., Lemke, S. und Schütz, F.  
Fraunhofer Institute for Industrial Engineering IAQ,  
Center for Responsible Research and Innovation (CeRRI)

**Design/layout:**  
DIAMOND media GmbH, Neunkirchen-Seelscheid, Germany

**Photo credits/sources:**  
[shutterstock.com](https://www.shutterstock.com)

**URL links:**  
This publication contains links to external websites. Responsibility for the content of the listed external sites always lies with their respective publishers. When the links to these sites were first posted, GIZ checked the third-party content to establish whether it could give rise to civil or criminal liability. However, the constant review of the links to external sites cannot reasonably be expected without concrete indication of a violation of rights. If GIZ itself becomes aware or is notified by a third party that an external site it has provided a link to gives rise to civil or criminal liability, it will remove the link to this site immediately. GIZ expressly dissociates itself from such content.

GIZ is responsible for the content of this publication.

Printed on 100% recycled paper, certified to FSC standards.

Bonn, 2020

# BEYOND CONNECTIVITY

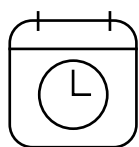
Leveraging Digital Innovation for SDGs 1 & 10



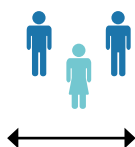
# The Pro-Poor Digitalisation Canvas

Despite all efforts to shape digitisation in a way that “no one is left behind”, there is still a lack of a scientifically sound strategy on how to translate the underlying SDGs 1 (“no poverty”) and 10 (“reduced inequality”) into policy decisions and innovation practices. Finally, the characteristics that distinguish poor from non-poor digital solutions are only vaguely known. It is precisely for this reason that it is crucial for a digital transformation that “leaves no one behind” to close the knowledge gap and allow for a policy-oriented assessment of how digital innovations can contribute to poverty-oriented development and help overcome existing inequalities. Acknowledging its methodological strength, the Pro-Poor Digitalisation Canvas breaks new ground by introducing a canvas-based approach to the field of Pro-Poor Digitalisation.

The Pro-Poor Digitalisation Canvas enables policy makers, development actors and innovators to assess single digital solutions or technology fields based on their potential for pro-poor developmental impact. In doing so, it allows them to strategically adjust any given digital solution throughout an interactive development process and identify means of promoting pro-poor digital innovation on a structural level. Applying design principles, the Pro-Poor Digitalisation Canvas serves as a hands-on tool to quickly assess the potential of digital technologies or services for effectively tackling different dimensions of poverty and inequality.



**30 MIN TO  
SEVERAL DAYS**



**1-10 PEOPLE**



**CANVAS  
TEMPLATE,  
POST-ITs, PENS**



The Canvas can either serve as a quick check tool over a 30-minute coffee break or it may as well provide the basis for an in-depth analysis guided by the auxiliary sub-questions and additional resources.

To use the Pro-Poor Digitalisation Canvas, simply print the canvas template (best in A3 or even a larger format) and follow the steps as described below. The Canvas allows for a step-by-step assessment of any given digital solution along each of three dimensions and five-sub dimensions respectively.

**Step 1:** Guided by the three questions in the template's first section, the user reflects upon the envisioned group of beneficiaries, their needs and the means by which the solution aims to serve those needs.

**Step 2:** This is the core of the Pro-Poor Digitalisation Canvas. Along a total number of 15 questions, the digital innovation will be scrutinized in reference to the three dimensions "Creation" (how the solution is produced and delivered), "Opportunity" (how the solution is accessed and used) and "Outcome" (how the solution unfolds a leverage effect). Whenever additional

guidance is needed or a certain dimension seems to be of particular relevance, the respective section in the user manual can be used to dig deeper. Whereas for "Creation" and "Opportunity" all sub-dimensions are equally important and must be considered simultaneously, it is sufficient to follow only one of the "Outcome" dimension's five impact mechanisms.

**Step 3:** Lastly, the Canvas incentivizes users to take a look ahead to identify structural barriers hindering implementation and consider potential negative side-effects.

There is no right or wrong in the use of the Pro-Poor Digitalisation Canvas. As long as it opens up new perspectives and sparks fresh ideas, you are on the right track. Thus, if you would like more information on the scientific rationale behind the tool or have additional questions, please do not hesitate to contact us any time at [poverty-inequality@giz.de](mailto:poverty-inequality@giz.de).

# PRO POOR DIGITALISATION CANVAS

NAME OF THE SOLUTION:

## 1 UNDERLYING NEED

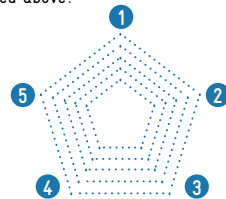
WHO IS THE TARGET USER OF THE DIGITAL SOLUTION?

WHAT PARTICULAR USER NEED DOES THE SOLUTION ADDRESS?

HOW DOES THE SOLUTION TACKLE THESE NEEDS?

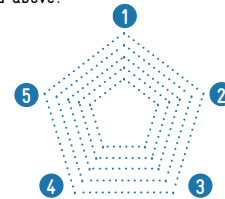
## 2 CREATION

- 1 **MARKET STRUCTURE:**  
Who is providing the solution and how is the solution provider positioned in the market?
  - 2 **CAPACITY BUILDING:**  
Who is developing the solution? Is capacity building an integral part of the process?
  - 3 **DATA OWNERSHIP:**  
Who owns the underlying data and who has access on what terms?
  - 4 **DATA SECURITY:**  
How is personal data stored and transmitted?
  - 5 **ACCOUNTABILITY:**  
How is accountability and transparency to local politics and civil society ensured?
- To which extent does the solution fulfil the 5 criteria mentioned above?



## OPPORTUNITY

- 1 **AVAILABILITY:**  
Do all people in the target region fulfil the solution's technical requirements?
  - 2 **AFFORDABILITY:**  
Can everyone afford the service?
  - 3 **AWARENESS:**  
Are the solution and its potential functions recognised?
  - 4 **ABILITIES:**  
Does the solution account for the (physical & cognitive) capabilities of all potential users?
  - 5 **AGENCY:**  
Do people have the freedom and the opportunity to make informed choices about the solutions (non-) use?
- To which extent does the solution fulfil the 5 criteria mentioned above?



## OUTCOME

- 1 **FULFILLING BASIC NEEDS:**  
The solution contributes to the satisfaction of one of the most basic needs, including food, water, education, health care or access to the Internet itself.
  - 2 **GENERATING ADDITIONAL INCOME:**  
The solution opens up new business and entrepreneurship opportunities for its users, hereby generating additional income as well as creating jobs.
  - 3 **ENHANCING PEOPLE'S AGENCY:**  
The solution has the potential to enhance people's agency and facilitate their political and social inclusion.
  - 4 **REDUCING VULNERABILITY:**  
The solution provides information about potential shocks or enables new ways of safeguarding.
  - 5 **CONSERVING NATURAL RESOURCE BASE:**  
The solution has the potential to reduce environmental burdens and to conserve the people's natural resource base.
- Through which of these mechanism does the solution unfold its impact? How?

## 3 CONCLUDING REFLECTION

- Which societal groups will particularly benefit from the solution?
- Which societal groups will potentially lose out? Might the solution cause new inequalities?
- Which hurdles need to be overcome to maximise the solution's impact?
- Which concrete measures can be taken?

## CREATION | MARKET STRUCTURE

### RATIONALE:

Digital innovation tends to concentrate market power among a handful of platform providers, thereby exacerbating not only economic but also political imbalances.

### GUIDING QUESTION:

Who is providing the solution and how is the solution provider positioned in the market?

### AUXILIARY SUB-QUESTION(S):

- Did the solution provider exploit an existing position of power in the process of solution development?
- Does the solution store or further enshrine market power in the hands of a single market player? Is that player of national, regional or global nature?
- Do other market players have the capacity to develop alternative solutions and thus disrupt the solution provider's market power in a timely manner?
- To which extent does solution development adhere to open source principles?

### ASSESSMENT: (0-5 POINTS)

To what extent is the solution the product of or basis for exploitation of market power?

- (1) The solution is provided by a global player monopoly/oligopoly.
- (2) The solution is provided by a global player operating in a competitive market environment.
- (3) The solution is provided by a local or regional player operating in a monopolistic/oligopolistic market environment.
- (4) The solution is provided by a local or regional player operating in a competitive market environment.
- (5) The solution is provided by a local or regional player operating in a competitive market environment. Where applicable, development adheres to open sources principles.

### ADDITIONAL RESOURCES:

- BMZ (2018): Toolkit Digitalisierung. Open Source – Nutzung und Entwicklung freier Software. (only available in German)  
(<https://toolkit-digitalisierung.de/praxis/konzeption-und-entwicklung/open-source/>)
- UNCTAD (2013): Promoting Local IT Sector Development through Public Procurement. ([https://unctad.org/en/PublicationsLibrary/dtlstict2012d5\\_en.pdf](https://unctad.org/en/PublicationsLibrary/dtlstict2012d5_en.pdf))



## CREATION | CAPACITY BUILDING

### RATIONALE:

Reducing existing inequalities requires opportunities for an 'upgrading' of economic activities. Building domestic capital, hereby enabling 'higher value-adding activities' within developing countries, depicts an essential lever within the creation of digital innovations.

### GUIDING QUESTION:

Who is developing the solution? Is capacity building an integral part of the process?

### AUXILIARY SUB-QUESTION(S):

- Where are 'higher value-adding activities' currently taking place? ['Higher value-adding activities' in the context of the digital economy are for example the reation of code & content or processing and analysing information<sup>53</sup>]
- Does the solution allow domestic firms to move from relatively low to higher value-adding activities by national/regional comparison?
- Does the solution allow for upward mobility of local production along global value chains?

### ASSESSMENT: (0-5 POINTS)

- Does the solution allow for upward mobility of local production along global value chains?
- (1) The solution is entirely developed by and in the Global North.
  - (2) The solution is developed in the Global North with some lower value-adding activities taking place in the local context.
  - (3) The solution is developed in the Global North but in cooperation with local stakeholders. Some higher value-adding activities take place in the local context.
  - (4) The solution is a product of North-South co-creation. Most higher value-adding activities take place in the local context.
  - (5) The solution is entirely developed in the Global South. All higher value-adding activities take place in the local setting.

### ADDITIONAL RESOURCES:

- BMZ (2018): Toolkit Digitalisierung. Tech-Start-up Förderung (only available in German) (<https://toolkit-digitalisierung.de/wissen/lokale-innovationen/tech-start-up-foerderung/>)





## CREATION | DATA OWNERSHIP

### RATIONALE:

Data is the key economic resource of the 21st century. Having control over (and the ability to potentially monetise) data is a source of political, social and economic power.

### GUIDING QUESTION:

Who owns the underlying data and who has access on what terms?

### AUXILIARY SUB-QUESTION(S):

- Is applying open data principles an option?
- If users hold their data, do they also have the means to exploit it?
- How easy is it for users to request and receive all information held about them?
- How easy is it for users to have their personal data deleted?
- How easy is it for users to request and transfer their data to another solution provider?

### ASSESSMENT: (0-5 POINTS)

To what extent does the solution allow its users to control their data and how its being used?

- (1) Data is controlled by solution provider or third party. Easy accessible information (reflecting user's capabilities) about its use is not provided.
- (2) Data is controlled by solution provider or third party. Despite accessible information being available, users can hardly determine their data's use.
- (3) Data is controlled by solution provider or third party. Users can make informed decision about its use.
- (4) Data is open (where applicable) or fully controlled by users. However, users do not have the means to exploit it.
- (5) Data is open (where applicable) or fully controlled by users, who have also the necessary means to exploit it.

### ADDITIONAL RESOURCES:



- BMZ (2018): Toolkit Digitalisierung. Offene Daten. (only available in German) (<https://toolkit-digitalisierung.de/praxis/implementierung/offene-daten-transparente-regierung-ge-meinsames-wissen/>)
- Open Data for Development: (<https://www.od4d.net/>)
- Open Knowledge Foundation (2020): Open Data Handbook. (<http://opendatahandbook.org/>)

## CREATION | DATA SECURITY

### RATIONALE:

As the “poorest and most marginalised are also more likely to suffer disproportionately from some of the darker aspects” (Unwin 2019, p. 45) of digitalisation (e.g. cybercrime, online sexual harassment, etc.), data security is not an add-on to pro-poor digital solutions but must be an integral component of them.

### GUIDING QUESTION:

How is personal data stored and transmitted?

### AUXILIARY SUB-QUESTION(S):

- Does the solution follow the principles of data minimisation (= adequate, relevant, limited to what is necessary)?
- Has a risk analysis regarding data security been carried out?
- Does a data management plan exist?
- Which safeguard mechanisms are in place?
- Are the measures in place appropriate given the level of the users’ vulnerability?

### ASSESSMENT: (0-5 POINTS)

To what extent does the solution take matters of data security into account and deploy pre-emptive measures?

- (1) Data security measures do not exist or show substantial gaps.
- (2) Data security measures are fragmentary, but collection and processing of personal data are kept to a minimum.
- (3) Data security measures are adequate (reflecting users’ vulnerability) and based on an initial risk assessment and data management plan.
- (4) Data security measures are fully GDPR (or equivalent) compliant.
- (5) Data security measures go beyond what is required by GDPR (or equivalent) standards.

### ADDITIONAL RESOURCES:



- GDPR Checklist: (<https://gdpr.eu/checklist/>)
- GIZ (2018): Responsible Data Guidelines. (<https://mia.giz.de/qlink/ID=245420000>)
- GIZ (2018): Responsible Data Guidelines – Toolbox. (<https://mia.giz.de/qlink/ID=245422000>)
- ICRC (2017): Handbook on Data Protection in Humanitarian Action. (<https://www.icrc.org/en/publication/handbook-data-protection-humanitarian-action>)
- Open Data Institute (2019): Data Ethics Canvas (<https://theodi.org/article/data-ethics-canvas/>)
- UN OCHA (2019): Data Responsibility Guidelines. (<https://centre.humdata.org/wp-content/uploads/2019/03/OCHA-DR-Guidelines-working-draft-032019.pdf>)

## CREATION | ACCOUNTABILITY

### RATIONALE:

Digital solutions have the potential to include and empower marginalised groups but often risk sidelining them even further. Hence, providers of digital solutions should be transparent and accountable to local politics and civil society.

### GUIDING QUESTION:

How is accountability and transparency to local politics and civil society ensured?

### AUXILIARY SUB-QUESTION(S):

- Is it possible for users, local governments and further stakeholders to assess the solution's impact? If so, how?
- Do local governments have sufficient capacities to keep up with solution development in term of regulatory frameworks and legislation?
- Are users, local governments or civil society representatives able to hold the solution provider accountable? If so, through which mechanisms?

### ASSESSMENT: (0-5 POINTS)

To what extent is the solution provider transparent and accountable to users, governments and other stakeholders?

- (1) Almost no relevant information publicly available.
- (2) Users and stakeholders are informed about relevant decisions.
- (3) Users and stakeholders are consulted in decision-making processes.
- (4) When making relevant decisions, the solution provider is actively seeking consensus with users and stakeholders.
- (5) Relevant decisions are taken within a collaborative process involving users and stakeholders.

### ADDITIONAL RESOURCES:

- Stanford Center of Philanthropy and Civil Society (2020): Integrated Advocacy. Paths forward for Digital Civil Society. (<https://pacscenter.stanford.edu/publication/integrated-advocacy-paths-forward-for-digital-civil-society/>)



## OPPORTUNITY | AVAILABILITY

### RATIONALE:

Availability refers to the presence of the necessary physical infrastructure, e.g. digital devices, mobile network coverage or broadband access (often also referred to as connectivity). However, it is important to note, that availability is not binary (being connected vs. remaining unconnected) but conveys more detailed gradations (e.g. stability of connectivity, data rates, etc.).

### GUIDING QUESTION:

Do all people in the target region fulfil the solution's technical requirements?

### AUXILIARY SUB-QUESTION(S):

- Does the solution make use of existing digital devices (e.g. smartphones) or does its usage require additional, solution-specific devices?
- To which extent are multi-purpose digital devices (such as smartphones) available throughout the population?
- If access to physical infrastructure and/or connectivity is restricted, along which lines does stratification unfold (e.g. class, gender, age, urban vs. rural)? (How) Does this circumvent the solution's intended impact?
- Are there additional social or cultural barriers restricting access for certain societal groups?

### ASSESSMENT: (0-5 POINTS)

- To what extent is physical access to indispensable infrastructure and thus the solution itself provided?
- (1) Almost no one has unrestricted and relatively stable physical access to indispensable infrastructure and thus the solution itself.
  - (2) Only the most advantaged people have unrestricted and relatively stable physical access to indispensable infrastructure, thus the solution itself.
  - (3) Many people have unrestricted, but fluctuating physical access to indispensable infrastructure and thus the solution itself.
  - (4) Most people have unrestricted and relatively stable physical access to indispensable infrastructure and thus the solution itself.
  - (5) Everyone has unrestricted and relatively stable physical access to indispensable infrastructure and thus the solution itself.

### ADDITIONAL RESOURCES:



- Broadband Commission (2019): Connecting Africa through Broadband. A Strategy for Doubling Connectivity by 2021 and Reaching Universal Access by 2030. ([https://www.broadbandcommission.org/Documents/working-groups/DigitalMoonshotforAfrica\\_Report.pdf](https://www.broadbandcommission.org/Documents/working-groups/DigitalMoonshotforAfrica_Report.pdf))
- Fraunhofer FIT (2019): Connecting the Unconnected. Tackling the Challenge of Cost-Effective Broadband Internet in Rural Areas. (<https://toolkit-digitalisierung.de/app/uploads/2019/10/Connecting-the-Unconnected-by-Fraunhofer-FIT-20191009-1.pdf>)
- OECD (2018): Bridging the Rural Digital Divide. ([https://www.oecd-ilibrary.org/science-and-technology/bridging-the-rural-digital-divide\\_852bd3b9-en](https://www.oecd-ilibrary.org/science-and-technology/bridging-the-rural-digital-divide_852bd3b9-en))

## OPPORTUNITY | AFFORDABILITY

### RATIONALE:

Even if the necessary physical infrastructure is available, its continuous and unrestricted use might not be affordable for all people (e.g. cost of hardware and electricity, mobile and data tariffs, etc.). Similar to availability, affordability is not binary as different levels of connectivity are also reflected in their respective prices.

### GUIDING QUESTION:

Can everyone afford the service?

### AUXILIARY SUB-QUESTION(S):

- How is the cost of the solution structured (e.g. single payment, monthly payment, pay per use ...)? How might this affect affordability?
- How does cost of use figure with respect to medium/median income, income of the bottom 10%, national poverty line etc.?
- Are budget-specific versions of the solution available? To which extent do users need to compromise on essential features when choosing such options?
- Are specific pro-poor business models/ mechanisms applied?

### ASSESSMENT: (0-5 POINTS)

To what extent is access to indispensable infrastructure and thus the solution itself affordable for everyone in the target population?

- (1) Almost no one in the target group can afford the solution.
- (2) The most advantaged people in the target group can afford the solution.
- (3) Many people can afford the solution, especially from middle-income groups.
- (4) Most people can afford the solution, including many from disadvantaged contexts.
- (5) Everyone, even the poorest, can afford the solution.

### ADDITIONAL RESOURCES:

- Alliance for Affordable Internet (A4AI): (<https://a4ai.org/>)



## OPPORTUNITY | AWARENESS

### RATIONALE:

Even if digital solutions are physically available and affordable, a lack of awareness regarding their existence, functions and relevance among the target group may constitute a third access barrier.

### GUIDING QUESTION:

Are the solution and its potential functions recognised within the target group?

### AUXILIARY SUB-QUESTION(S):

- How well-developed is public awareness with respect to the problem the solution is designed to address?
- How do people get informed about the solution and its functions?
- Does the form of information presuppose any physical or cognitive skills (e.g. ability to read)?
- If so, is the campaign at risk of missing out on larger population segments? Which are those?

### ASSESSMENT: (0-5 POINTS)

To what extent is information about the solution and its problem-solving capacity accessible to everyone in the target population?

- (1) Information about the solution or the problem itself is hardly available to the target population.
- (2) The most advantaged groups in the target population can access relevant information (high threshold).
- (3) Many people, especially from middle-income group, can access the information.
- (4) Information on both problem and solution are available to most people, including from disadvantaged contexts.
- (5) Information on both problem and solution are widely available and specifically designed for disadvantaged target groups (low threshold).

### ADDITIONAL RESOURCES:



## OPPORTUNITY | ABILITIES

### RATIONALE:

Effectively using digital innovations might presuppose a set of physical (e.g. being able to see or to hear) and cognitive (e.g. being able to read, having a certain level of digital literacy) abilities, resulting in unequal access based on the availability resp. unavailability of these skills.

### GUIDING QUESTION:

Does the solution account for the (physical & cognitive) capabilities of all potential users?

### AUXILIARY SUB-QUESTION(S):

- Who is excluded due to a lack of certain physical or cognitive abilities?  
How could their inclusion be allowed for?
- Is user support provided? In which form?
- Are training and training resources for general digital skills available? To whom?

### ASSESSMENT: (0-5 POINTS)

To what extent is the solution usable, accessible and comprehensible to everyone in the target population?

- Good consideration of accessibility issues.
- Good consideration of usability issues.
- Widely usable considering the given level of education and literacy in the target population.
- Accessible in all languages relevant to target population.
- Sensitive to social and cultural norms shared throughout the target population.

### ADDITIONAL RESOURCES:



- #eSkills4Girls: World Map on Digital Skills Trainings for Women & Girls.  
(<https://www.eskills4girls.org/map-full/>)
- ITU (2018): Digital Skills Toolkit.  
(<https://www.itu.int/en/ITU-D/Digital-Inclusion/Documents/ITU%20Digital%20Skills%20Toolkit.pdf>)
- OECD (2019): OECD Skills Outlook 2019. Thriving in a Digital World.  
([https://www.oecd-ilibrary.org/education/oecd-skills-outlook-2019\\_df80bc12-en;jsessionid=MTC3hJwKTMx3dMwxyZm1r3mp.ip-10-240-5-167](https://www.oecd-ilibrary.org/education/oecd-skills-outlook-2019_df80bc12-en;jsessionid=MTC3hJwKTMx3dMwxyZm1r3mp.ip-10-240-5-167))
- User Experience Testing:  
(<https://www.ueq-online.org/>)
- Web Content Accessibility Guidelines:  
(<https://www.w3.org/TR/WCAG21/>)
- Web Content Accessibility Quick Check:  
(<https://www.w3.org/WAI/test-evaluate/preliminary/>)

## OPPORTUNITY | AGENCY

### RATIONALE:

Being an active agent of change rather than a passive recipient of external support lies at the heart of people's empowerment. To exercise agency, people must be endowed with both freedom and opportunity to make informed choices about the use or non-use of digital solutions.

### GUIDING QUESTION:

Do people have the freedom and the opportunity to make informed choices about the solutions (non-) use?

### AUXILIARY SUB-QUESTION(S):

- Do viable alternatives exist?
- Do users have the capability to assess the solution's quality and value for money?
- Do users know where and how to address any issues they might have with the solution?

### ASSESSMENT: (0-5 POINTS)

To what extent can people make informed choices about the use or non-use of the solution?

- Freedom to choose (non-) use.
- Existence of viable alternatives.
- Mechanisms to assess quality are in place, e.g. regular reports, open discussion.
- Users have the possibility to contact customer support and file complaints.
- Users can connect to other users to exchange about the service.

### ADDITIONAL RESOURCES:





## OUTCOME | FULFILLING BASIC NEEDS

### RATIONALE:

Digital innovations have the potential to contribute to the satisfaction of some of the most basic needs, including food, water, education, health care and nowadays access to the Internet itself.

### GUIDING QUESTION:

Does the solution unfold its impact through this first mechanism? If so, how?

### AUXILIARY SUB-QUESTION(S):

- Does the solution identify the satisfaction of (a) basic need(s) as its main or one of its main targets?
- How large is the share of the target population currently unable to meet the basic need to be addressed?

### ASSESSMENT: (0-5 POINTS)

To what extent does the solution cater to the target population's basic needs?

- (1) The solution shows no concern for people's basic needs.
- (2) The solution somewhat improves access to a basic good which had already been available to the majority of the local population.
- (3) The solution significantly improves access to a basic good for some part of the local population.
- (4) The solution caters to a basic need, some minorities had previously been deprived from.
- (5) The solution caters to one or more basic needs, significant numbers of people had previously been deprived from.

### ADDITIONAL RESOURCES:



## OUTCOME | GENERATING ADDITIONAL INCOME

### RATIONALE:

Digital innovations can open up business and entrepreneurship opportunities which did not exist before, hereby generating additional income and/or creating jobs. Examples encompass new distribution channels through e-commerce platforms or micro-work in the gig economy.

### GUIDING QUESTION:

Does the solution unfold its impact through this second mechanism? If so, how?

### AUXILIARY SUB-QUESTION(S):

- Does the solution bear potential for additional income generation? Through which means?
- If the solution allows for the creation of additional jobs, of which nature are these jobs and which segments of society might they be available to respectively?
- Are certain labour standards ensured? If so, how?
- Is there potential for spill-over effects, e.g. by tapping new sales markets for local products?

### ASSESSMENT: (0-5 POINTS)

To what extent does the solution allow for additional income generation beyond the original business idea?

- (1) The solution does not create any additional opportunities for income generation.
- (2) The solution creates additional opportunities for income generation among advantaged and/or middle class individuals.
- (3) The solution creates some additional opportunities for income generation, including among marginalised target groups.
- (4) The solution creates additional income opportunities on a larger scale. They are particularly relevant and accessible to marginalised target communities.
- (5) The solution creates target group-sensitive income opportunities on a larger scale. Positive spill-overs to different segments of the local economy can be observed.

### ADDITIONAL RESOURCES:

- Fairwork Foundation: Fairwork Platform Ratings. (<https://fair.work/ratings/>)



## OUTCOME | ENHANCING PEOPLE'S AGENCY

### RATIONALE:

Sen's<sup>54</sup> idea of 'development as freedom' suggests moving beyond a merely materialistic view. Against this background, a digital solution can be assessed based on its ability to enhance people's agency and facilitate their political and social inclusion.

### GUIDING QUESTION:

Does the solution unfold its impact through this third mechanism? If so, how?

### AUXILIARY SUB-QUESTION(S):

- Does the solution enhance people's ability to shape their own destiny, e.g. by improving access to financial services thus empowering them economically?
- Does the solution facilitate social inclusion of formerly estranged groups?
- Does the solution improve people's ability to claim and exercise their right to political participation?

### ASSESSMENT: (0-5 POINTS)

- To what extent does the solution build up the target population's social, economic or political agency?
- (1) The solution does not carry any agency-enhancing features.
  - (2) The solution strengthens people's agency in at least one realm. However, it is especially dominant societal groups who benefit.
  - (3) The solution strengthens people's agency throughout different realms, also benefitting marginalised groups.
  - (4) The solution strengthens people's agency in at least one realm, particularly benefitting marginalised groups.
  - (5) The solution enhances people's agency throughout different realms. Previously marginalised groups are especially empowered at a large scale.

### ADDITIONAL RESOURCES:



## OUTCOME | REDUCING VULNERABILITY

### RATIONALE:

Daily life in developing countries is often inherently risky for the poor (e.g. crop failures, natural disasters, epidemics, conflict). Digital solutions can not only provide information about potential shocks and facilitate traditional ways of reducing risk through kinship networks but also enable new ways of safeguarding, e.g. through micro-insurances.

### GUIDING QUESTION:

Does the solution unfold its impact through this fourth mechanism? If so, how?

### AUXILIARY SUB-QUESTION(S):

- How relevant is the risk to be mitigated to the local context?
- Are there any societal groups that are affected disproportionately by the risk? Which are those?
- Does the solution significantly reduce said risk? If so, how?
- Does the solution aim to mitigate the risk itself or rather manage a given shock's consequences?

### ASSESSMENT: (0-5 POINTS)

To what extent does the solution mitigate or help manage the specific risks faced by the target population?

- (1) The solution addresses a risk somewhat relevant to the local setting.
- (2) The solution addresses a risk particularly relevant to the local setting.
- (3) The solution addresses a risk disproportionately affecting marginalised target groups.
- (4) The solution helps manage the consequences of any such risk.
- (5) The solution helps to both manage consequences and limit the scope of any given disaster in the first place.

### ADDITIONAL RESOURCES:



## OUTCOME | CONSERVING NATURAL RESOURCE BASE

### RATIONALE:

In light of the poor's reliance on the natural resource base of their immediate environment (especially in rural areas), a digital innovation's ability to reduce environmental burdens and conserve rather than deplete resources makes for a fifth impact mechanism.

### GUIDING QUESTION:

Does the solution unfold its impact through this fifth mechanism? If so, how?

### AUXILIARY SUB-QUESTION(S):

- Does the solution take matters of resource conservation into account?
- Does the solution work to protect or even restore a given natural resource?
- Which role does this resource play in the wider local context (e.g. ecologically, culturally, economically)?

### ASSESSMENT: (0-5 POINTS)

To what extent does the solution work to conserve or replenish natural resources critical to the target population's well-being?

- (1) The solution disregards matters of sustainability and further depletes finite resources.
- (2) The solution does not use finite resources but overuses renewable resources.
- (3) The solution works within the self-restoration boundaries of all resources concerned.
- (4) The solution actively works to preserve the natural resource base.
- (5) The solution not only preserves, but also actively works to replenish natural resources.

### ADDITIONAL RESOURCES:



## SPOTLIGHT: ASSESSMENT

Evaluating digital solutions along the 15 dimensions of the Pro-Poor Digitalisation Canvas allows identifying those innovations that will get us one step closer to a poverty-free and more equal world. As has repeatedly been pointed out, the approach presented throughout this report distinguishes itself by approaching the issue of pro-poor digitalisation in a deliberately holistic manner. Most importantly, this implies that none of the framework's dimensions should be prioritised over another. Regardless, policy makers and development actors have a legitimate desire to compare different solutions against one another to make decisions on the allocation of funds and institutional support. This section of the report offers some guidance on how to evaluate a single solution's performance across the board and how to tell a lame duck from a carthorse. To start off, you want to calculate the average score within the framework's **Creation** and **Opportunity** dimension.

To this end ...

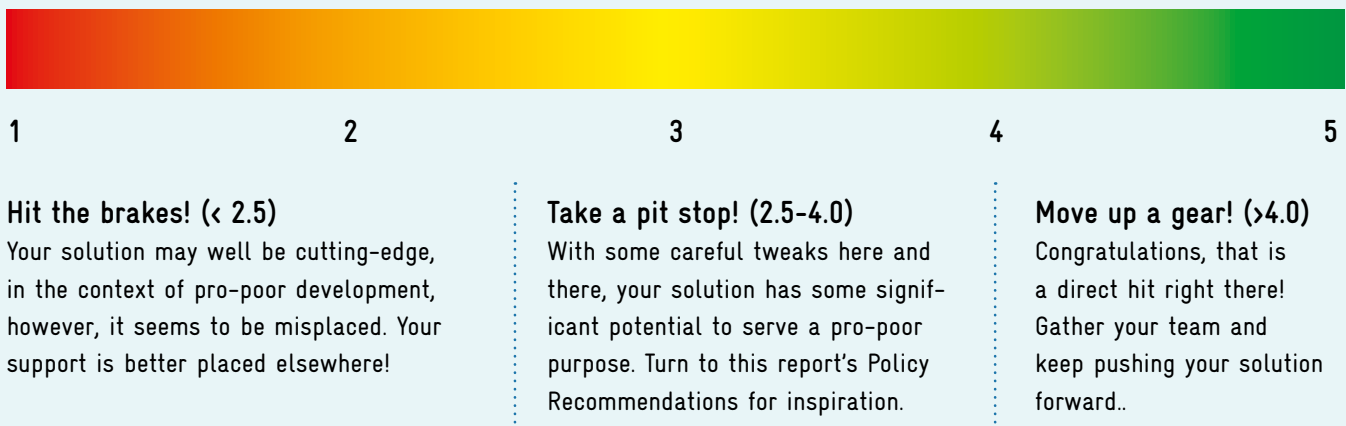
- Add up the scores your solution achieves in each of the five **Creation** sub-dimensions and divide them by five. This will leave you with a score somewhere between one and five.
- Do the same thing across the five **Opportunity** sub-dimensions. Again, you will be left with an average score between one and five.

While some of us may still yearn for some magic quick fix to poverty and inequality, a single digital solution cannot reasonably be expected to 'do it all'. For example, if a solution significantly improves people's ability to meet a basic need – say food, shelter, or internet access – it is no less valuable just because it does not also generate additional income or help conserve the natural resource base. For this reason, to evaluate **Impact** performance, we ask you to ...


- Use this report's User Manual to determine your solution's **Impact** performance in just one out of five categories. Solutions may achieve a maximum of five points.

If a given solution delivers impact across more than one category, only consider the most important one. Again, finding a one-fits-all solution may sound tempting, still we urge you to seek focus rather than breadth.

Lastly, add up the average scores across dimensions and divide the sum by three. You will end up with an average score ranging from 1 (worst possible pro-poor performance) to 5 (best possible pro-poor performance). The traffic light system displayed below will help you to decide where to move up a gear – and where to do hit the brakes instead:







Deutsche Gesellschaft für  
Internationale Zusammenarbeit (GIZ) GmbH

Registered offices  
Bonn and Eschborn

Friedrich-Ebert-Allee 36 + 40  
53113 Bonn, Germany  
T +49 228 44 60-0  
F +49 228 44 60-17 66

Dag-Hammarskjöld-Weg 1 - 5  
65760 Eschborn, Germany  
T +49 61 96 79-0  
F +49 61 96 79-11 15

E [info@giz.de](mailto:info@giz.de)  
I [www.giz.de](http://www.giz.de)