

Photo Source: Field Ready

CREATING
HOPE
IN CONFLICT:

A HUMANITARIAN
GRAND CHALLENGE

This case study was created in collaboration with

TRIPLELINE

OUTCOME CASE STUDY

FIELD READY

SEPTEMBER 2023



TABLE OF CONTENTS

CASE STUDY SUBJECT	3
EXECUTIVE SUMMARY	4
1. DESCRIPTION OF INNOVATION AND DELIVERY CONTEXT	7
2. INTERMEDIATE OUTCOMES ACHIEVED, THEIR SIGNIFICANCE AND CHIC CONTRIBUTION	8
3. LESSONS LEARNED AND CHALLENGES	18
4. IMPACT AND VALUE FOR MONEY ASSESSMENT: OVERVIEW AND RATIONALE	20
ASSESSMENT CRITERIA	20
IMPACT 1: INNOVATION COSTS AND BENEFITS	21
IMPACT 3: INNOVATION ADOPTION IN THE HUMANITARIAN SYSTEM	23
IMPACT 2: INCREASING EFFICIENCY AND COST-EFFECTIVENESS OF HUMANITARIAN ASSISTANCE	25
INNOVATION VALUE FOR MONEY ASSESSMENT	26
ANNEX 1. STRENGTH OF EVIDENCE ASSESSMENT CRITERIA	29
ANNEX 2. CHIC THEORY OF CHANGE	30
ANNEX 3. EVIDENCE SOURCES	31

CASE STUDY SUBJECT

INNOVATION PROJECT TITLE	Making Essential Items Field Ready		
NAME OF IMPLEMENTING ORGANIZATION	Field Ready	TIMEFRAME	1st January 2020 – 31st December 2021, extended to 31st May 2022 (29 months)
LOCATION	Northwest Syria	CASE STUDY PERIOD	June - July 2022
GRANT VALUE	CAD \$1M	GRANT TYPE	Transition to Scale (Round 1 grant)
CASE STUDY AUTHORS	Triple Line: Simon Hale, Clarissa Poulson & Esther Winslow (UK) Jouri: Mohammed Bashar Mahrousa & Mohamad Alhayes (UK & Turkey)		

EXECUTIVE SUMMARY

Damaged infrastructure mean populations living in conflict-affected areas have difficulty in accessing essential medical supplies and equipment. The typical international humanitarian response is to source new equipment from abroad, which is slow and costly. Creating Hope in Conflict: A Humanitarian Grand Challenge (CHIC) funded Field Ready to establish a local infrastructure model in Syria and demonstrate that an alternative model is possible and scalable. The model would ensure medical products were delivered to hospitals and clinics faster, cheaper, and more efficiently compared to traditional procurement routes, meaning more people would receive timely, appropriate care. The infrastructure would consist of providing digital technology for local manufacturers, training local manufacturers to repair and replace existing devices, providing quality assurance checks, training medical practitioners to operate, repair and maintain devices, and facilitating relationships between local suppliers (the manufacturers) and local buyers (the medical centres).

Creating Hope in Conflict: A Humanitarian Grand Challenge contracted Triple Line Consulting to deliver a series of outcome and value for money case studies for a sample of funded innovations. The principle objectives of these case studies are:

- To capture outcomes delivered by the CHIC program and validate CHIC's contributions that led to these outcomes.
- To support CHIC in delivering value for money case studies by providing the evidence base on the achievement of intermediate outcomes and CHIC's contribution to these.

Below is a summary of the findings of the outcome and value for money case study developed for Field Ready, a CHIC-funded innovation.

INTERMEDIATE OUTCOMES ACHIEVED, THEIR SIGNIFICANCE AND CHIC CONTRIBUTION

OUTCOME 1 – CHIC support to achieve scale and sustainability. Field Ready delivered on its transition to scale objectives by providing 35 new devices, servicing 36 additional hospitals and delivering 200 new parts. Local workshops were operating successfully and Field Ready had generated high demand for their services by the end of the project. Field Ready demonstrated that a local supply chain of medical equipment repair and supply is viable within conflict settings. They also applied their model in a second CHIC-funded project in collaboration with two other CHIC grantees. However, hospitals do not have the funds to continue major repairs without Field Ready's support and Field Ready had to discontinue the project when the CHIC funding ended. Field Ready are continuing to advocate for local supply chain models within humanitarian settings using evidence that was generated through the CHIC project. Through the Local Procurement Learning Partnership which they co-founded, Field Ready regularly participates in research, speaks to donors, and shares lessons on local manufacturing.

OUTCOME 2 – Further investment and completion of transition-to-scale phase. Field Ready established many implementing partnerships to support the delivery of their innovation, including with authorities and relevant ecosystem actors. They were also able to demonstrate significant cost efficiencies resulting from their model. Despite this, as noted Field Ready were unable to secure further funding from other sources to continue the project and establish the financial sustainability of their model. Now that Field Ready has demonstrated that their model is scalable, the service relies on consistent funding from donors willing to support the delivery of medical supplies in conflict affected areas.

OUTCOME 3 – Use of innovation by vulnerable populations affected by conflict and by humanitarian responders. During the lifetime of the grant, Field Ready significantly exceeded their targets and reached 100,886 end users with their repaired or manufactured health devices. Furthermore, they were able to reach vulnerable groups who would have otherwise not been able to access medical care at all. Family members of ill or injured individuals also saw financial and social benefits from devices being available for their relatives. Medical staff, engineers, and facility managers in need of resources also received and appreciated the direct support provided by Field Ready.

OUTCOME 4 – Humanitarian ecosystem is strengthened. Despite Field Ready and CHIC's efforts to share lessons about Field Ready's localized model with actors in the humanitarian ecosystem, there is little evidence of this advocacy leading uptake of a localised model across the humanitarian ecosystem thus far.

Unforeseen intermediate outcome level results include long term benefits of medical staff having the skills to maintain medical devices and manufacturers being able to offer new services to boost their income. There have also been unexpected secondary effects such as reducing the environmental costs of delivering spare parts or new devices to conflict-affected areas and seeing an improvement in the mental health of ill or injured individuals and their families.

CHIC's contribution to results was principally through its grant funding which paid for Field Ready to set up the infrastructure and provide a training and networking role to manufacturers and health facilities. Additionally, CHIC helped Field Ready strengthen their approach to gender equality and build their capacity in evidence generation and networking.

LESSONS LEARNED AND CHALLENGES

- There remains systemic barriers to sustainability for innovations operating in conflict settings, such as limitations in existing funding models and international humanitarian metrics;
- There remains a need to focus on advocacy and evidence generation to increase the likelihood of innovation uptake by other actors;
- There are security and cultural barriers to implementing international gender-equality standards;
- The need to formally register with the local authorities to facilitate logistics and security.

IMPACT AND VALUE FOR MONEY ASSESSMENT

The **Value for Money assessment** for Field Ready examines its contribution to impact against expectations.

IMPACT I – innovation costs and benefits:

Assessment: Very good – the impact considerably exceeds expectations

- Using cheaper methods than standard practices in the humanitarian sector, Field Ready have exceeded the expected number of individuals reached with their repaired or replaced medical equipment, reaching both female and male patients. The quality and durability of devices is reported by medical practitioners to be very good.
- Health facility staff have improved the effectiveness of their health facilities through the training provided by Field Ready and local technicians have been exposed to new skills that have the potential to access a new market (health facilities).
- Other unquantified benefits include reduced carbon emissions in medical equipment delivery and continued relationships between skilled manufacturers and medical facilities where facilities can obtain further funding to procure more equipment.

IMPACT 3 - Innovation adoption in the humanitarian system:

Assessment: Good – impact exceeds expectations

- Field Ready exceeded expectations for humanitarian system change in terms of generating the first large-scale, methodologically robust, independent assessment of the core proposition of using local supply chains in a humanitarian setting and observing its intended benefits.
- Wider adoption is dependent upon evidence generation and humanitarian actor uptake of Field Ready's model.

IMPACT 2 - Increasing efficiency and cost-effectiveness of humanitarian assistance:

Assessment: Good – impact exceeds expectations.

- Field Ready generated evidenced cost and time savings in the delivery and repair of medical devices in NW Syria.

OVERALL FIELD READY VALUE FOR MONEY ASSESSMENT:

Very Good – Field Ready's innovation has exceeded VFM expectations.

I. DESCRIPTION OF INNOVATION AND DELIVERY CONTEXT

Delivering health services in conflict settings is challenging. Damaged infrastructure leads to difficulties in providing essential supplies and maintaining equipment, meaning that standard healthcare practices and procedures that are adhered to in stable settings cannot be followed because healthcare workers do not have what they need. This is the case for Syria, a country that has been experiencing conflict for more than a decade. The impact on healthcare and other social services has been extremely severe, particularly in the country's northwest region. Health facilities in the region are dependent on humanitarian funding to maintain operations, including the cost of equipment repair and replacement. The typical international response is to import new equipment which has a high cost and entails severe logistical obstacles. 60-80% of humanitarian aid is spent on 'logistical costs',¹ and still many communities face extreme shortages in equipment and supplies. This has dire consequences for people living in those communities, including the risk of having to live with life-limiting conditions, increased risk of life-threatening infections due to lack of equipment and treatment or, for those with the option, the cost and risk of travelling to locations, such as Turkey, where services are available. In the worst cases, people die waiting for treatment.

Through the CHIC grant, Field Ready expanded their local-infrastructure model and proved that an alternative way of delivering vital healthcare materials at scale is possible. Field Ready provided a demand-led, local repair and fabrication service to health facilities in Northwest (NW) Syria covering medical devices and associated equipment ('items'), particularly in relation to trauma and surgery. The resulting products were delivered to hospitals and clinics faster, cheaper, and more efficiently compared to traditional procurement routes, meaning more people received timely, appropriate care.

Field Ready deliver their services by:

- Conducting a cost-benefit triage methodology to assess how medically important the requested item is (to what extent it is a 'pain point' for the facility), and to determine whether the item can in fact be repaired/fabricated locally to a high standard, and more quickly and cheaply than by the traditional route.
- Using a combination of imported digital technology (such as 3D printers), and local skills and repair facilities (such as welders) for item repair and fabrication.
- Implementing a design and quality assurance process using international professional advisors, accessed online, to ensure that the repaired/fabricated item is well designed and of acceptable quality. Performance monitoring and user feedback is obtained as part of the quality assurance process, and support is provided to local manufacturers where necessary to improve performance and service delivery.
- Training, capacity building and networking for local engineers and technicians, both those recruited to work in the Field Ready 'makerspace' and sub-contractors (for example in the use of digital technology).
- Training and capacity building for health facility medical and technical staff in the operation, repair, and maintenance of items.

Field Ready engaged with the Syria Health Cluster led by the World Health Organization from the outset of the development of this innovation and throughout the implementation period, so as to work within the existing health structures. Health facilities supported as part of this project included those with a direct link with the cluster system through NGOs with officially registered headquarters.

¹CHIC-HGC (2021) Field Ready Cost Effectiveness Report

2. INTERMEDIATE OUTCOMES ACHIEVED, THEIR SIGNIFICANCE AND CHIC CONTRIBUTION

INTERMEDIATE OUTCOME 1: Enhanced effectiveness and efficiency of CHIC in supporting humanitarian innovations to achieve scale and sustainability

This outcome is focused on the support which CHIC provides to innovators to position them to continue operations beyond the grant and/or move along the innovation pathway (e.g. from proof of concept to scaling). Of the five indicators of achievement in the CHIC logframe, two are relevant to the innovation case studies: 1) measuring collaborations, connections and partnerships introduced or cultivated through CHIC (intermediate outcome indicator 1.4); and 2) measuring satisfaction with the CHIC technical assistance (TA) in supporting scale or sustainability (immediate outcome indicator 1). This section opens with the scaling achieved by the innovation before exploring CHIC's contribution towards it (through partnerships and TA) and the challenges to scaling and sustainability encountered.

SCALING ACHIEVED

Field Ready successfully achieved their transition to scale objectives in NW Syria as a result of the grant received from CHIC. The target was to expand their catalogue of parts in Syria with 35 new devices and 200 parts, and to service an additional 36 hospitals. Field Ready achieved this target by repairing 215 medical devices and delivering 39 new products to 28 facilities. By the end of the project, Field Ready had received many requests for more equipment and repairs, showing there is strong demand for their work to continue in existing areas and scale to other areas.

Field Ready's primary scaling plan in the longer term was to expand the model beyond the project in NW Syria by securing funding to continue operations in other areas and beyond the lifetime of the CHIC grant, and through the adoption of the innovation by other aid agencies. The CHIC grant and non-financial support has not (yet) enabled Field Ready to grow its operations in NW Syria, or indeed to sustain them, beyond the end of the funding. Lack of funding in the health system means that the hospital technicians Field Ready has worked with are not able to commission and pay for medical device repairs from the technicians trained by the project. Field Ready's NW Syria operations themselves have ceased and they have not been able to continue employing the project's staff, both technical and operational/management.

Field Ready are continuing their advocacy efforts through the Local Procurement Learning Partnership which they co-founded (see VfM Impact 3 below), participating in research and webinars on the challenges of local manufacturing, regularly sharing success stories on social media, speaking to known donors and networks, and widely publishing the evidence obtained from an external evaluation they commissioned during the CHIC grant period (see Outcome 2 below).

PARTNERSHIPS / COLLABORATIONS ESTABLISHED WITH CHIC SUPPORT

CHIC support led to partnerships of value to Field Ready, both for delivery of the CHIC funded project and at an organizational level. CHIC also played a significant role in facilitating Field Ready's registration in Turkey.

²thus meeting the third ALNAP criteria for success in humanitarian innovation: Consolidated Learning and Evidence. See Obrecht, A et al (2016) More than just luck: innovation in humanitarian action.

Beyond the project, Field Ready established a consortium with two existing CHIC grantees to whom they had been introduced through the CHIC community - Needslist and Humanitarian OpenStreetMap - to respond to CHIC's call for innovations to address Covid-19-related challenges. The proposed project, to deliver personal protective equipment (PPE) to communities in Bangladesh, Iraq, Uganda and Kenya, was successful in securing a CHIC grant and, at the time of writing, was still ongoing.

Although Field Ready did not secure follow on funding for their Syria operations and have not yet seen their model adopted by others (although there is some interest), they offer significant value by generating and sharing their knowledge on how local manufacturing can work.² In order to share this process innovation wider, CHIC put Field Ready in touch with Reach Alliance, who have been conducting academic research on the benefits and challenges of localisation, specifically, local manufacturing. At the time of writing, this research was still ongoing.

TA SUPPORT FOR SCALING AND SUSTAINABILITY

According to the grant agreement, Field Ready's aims for scale and sustainability during the lifetime of the CHIC grant were to "Develop and implement a revenue diversification plan, inclusive of increased distributed manufacturing efforts with key partners and any other initiatives to diversify income towards long-term sustainability". With support from CHIC through the WFP Innovation Accelerator, Field Ready explored the idea of a commercial spin-off. WFP provided tailored advice over six sessions (each lasting up to 2 hours), leading to Field Ready narrowing their scaling strategy and identifying five ways to diversify their income. They really valued WFP's support (which they described as 'incredibly helpful'), although they concluded that commercialisation was not a viable route in Syria because of the health facilities' inability to pay for repair services, the exercise usefully confirming their view that vital health services in conflict-affected communities would always be reliant on donor funding (or at least would not be able to rely on a commercial model). For this reason, Field Ready decided not to make use of CHIC funds to hire a specialised commercialisation officer.

Instead, Field Ready's strategy was to use some of the CHIC grant to commission an evaluation which would, they hoped, clearly demonstrate that their localized manufacturing model offered a cheaper and faster solution than the conventional approach of importing equipment and supplies. The external and independent evaluation did indeed demonstrate this, and the Field Ready team said that they 'could not emphasise enough' the importance of this evidence to them and the fact that it had 'for the first time proved the value of what we are doing'. Unfortunately, however, at the time of the case study research, Field Ready had not yet been able to use this evidence to secure additional funding from other donors for their operations in NW Syria. Obtaining long-term, sustainable funding remains a very significant challenge (See lessons below).

OTHER CHIC SUPPORT FOR SCALING AND SUSTAINABILITY

During the grant, Field Ready were also supported by CHIC to hire a Gender Equality consultant to conduct a global gender audit that identified strengths and areas for improvement in their overall gender equality strategy. The outcomes of the support include improved gender sensitivity in Field Ready's needs assessment and project design processes which, in turn, has enabled Field Ready to score more highly on subsequent grant applications that have rigorous requirements in relation to preventing gender-based violence and ensuring wider safeguarding. Changes made in response to the gender equality audit include: adding gender specific sections to their Rapid Site Assessment Tool,

always including a female member of staff in the Rapid Site Assessments, consulting with external experts and female doctors to ensure that product design appropriately reflects the health needs of women and girls, disaggregating monitoring data by gender, age and disability status, and briefing the engineering team on gender sensitivity. During analysis, particular attention was paid to women and girls' access to the facilities, and availability of items which are essential for their care. In facilities that had lower numbers of female attendees, efforts were made to establish alternative ways for women to seek treatment.

CHIC also granted Field Ready a five-month no-cost extension so that they could complete their intended work, including the evaluation.

CHIC introduced Field Ready to donors – for example taking the opportunity, at the onset of the Ukraine crisis, to showcase suitable innovations to partners looking for quickly deployable solutions. Field Ready valued this wider exposure and responded to such opportunities quickly but were disappointed that, despite interest and discussions in some cases, this had not resulted in secured funding.

CHIC also introduced Field Ready's innovation to researchers, for example the Reach Alliance, who were researching local manufacturing, thus supporting Field Ready's participation in local manufacturing research and initiatives.

SCALING AND SUSTAINABILITY: THE ONGOING CHALLENGE

In an attempt to leave a sustainable infrastructure in place beyond the lifetime of the grant, Field Ready conducted a mapping exercise to link up the manufacturers with hospitals and trained health facility staff on device repair and functionality. Trained technicians can now replace and maintain some small malfunctions on their own if no funds are needed for parts. However, hospitals do not have the funds to continue major repairs without Field Ready's support.

Strength of Evidence: Strong

Evidence is from Field Ready progress reports, an independent evaluation commissioned by Field Ready, interviews with CHIC staff, Field Ready staff, and practitioners and manufacturers in NW Syria. Evidence has been triangulated wherever possible.

INTERMEDIATE OUTCOME 2: Increased effectiveness and efficiency of innovators in generating further investment and successfully completing the seed and transition-to-scale phases

This outcome focuses on innovator-led actions to support successful grant delivery during the grant period. Indicators relate to leveraging of additional funding (intermediate outcome indicator 2.1) and establishing quality partnerships (intermediate outcome indicator 2.2) to support this, evidence about innovation cost efficiency (intermediate outcome indicator 2.3) and successful completion (immediate outcome indicator 2). This section presents evidence for each of these, starting with the completion of achievements, before examining the leveraged funding, partnerships, and demonstrated cost efficiencies, exploring also how success was achieved.

PROJECT DELIVERY

Field Ready completed their key project within the funding period. Principal end of project delivery output level milestones³ were as follows:

- (Interim milestone) A Gender Equality Strategy and M&E plan, inclusive of an approach to conducting a Gender Equality Analysis was submitted for review.
 - Completed. Field Ready reported that their hiring of a Gender consultant, with CHIC support, had strengthened their approach to gender equality within their programming.
- Selection and detailed assessment of sites: target 40 health facilities.
 - Completed slightly below target. Field Ready worked in 28 health facilities.
- Final revenue diversification plan to diversify income towards long-term sustainability.
 - Completed. Outlining the focus, funding type/source, estimated target amounts and actions to secure them, the plan represents all scaling activities and not simply those relating to Field Ready's programming in Syria.
- Product Development Plans target to add 35 new devices and 200 replacement components to catalogue; tested, feedback obtained, final report.
 - Met and exceeded. Field Ready delivered 39 new products and repaired 215 medical devices.

ADDITIONAL FUNDING

Field Ready's application records a verified amount of \$297,402 in match funding for the project from an NGO source. No further funding for the project was obtained to expand or sustain the project, despite promising leads with two donors in particular towards the end of the grant. Reasons for this are explored below under Lessons Learned and Challenges.

PARTNERSHIPS

Field Ready established many partnerships in NW Syria to support delivery of their innovation.

Authorities and over-seers: Health services in NW Syria are overseen by the Idlib Health Directorate, which covers areas controlled by the Syrian Interim Government, and by the Kilis Health Directorate, based in Turkey and covering Azaz and surrounds, an area outside the control of the Syrian regime.

The Health Directorates were sources of key information about the provision of health services in each area, the needs and priorities, and how Field Ready could support critical facilities serving the largest number of people. As co-ordinators of aid in their areas, the Directorates also acted as gatekeepers to activities there. Field Ready signed a protocol with the Kilis Directorate concerning financial transfers and submitted reports on expenditure to it to ensure smooth operations and transparency, having secured registered status to obtain permission to operate in Turkey. Importantly, the CHIC team supported Field Ready's registration efforts in Turkey, which gave a basis for the protocol agreement and enabled it to operate.

Authorities and over-seers: Health services in NW Syria are overseen by the Idlib Health Directorate, which covers areas controlled by the Syrian Interim Government, and by the Kilis Health Directorate, based in Turkey and covering Azaz and surrounds, an area outside the control of the Syrian regime. The Health Directorates were sources of key information about the provision of health services in each area, the needs and priorities, and how Field Ready could support critical facilities serving the largest

³Field Ready Grant Agreement Attachment C – Schedule of Milestone. Outcome and Impact level achievements against target are covered in the relevant sections of the case study (outcome 3 and impact 1): number of persons using innovative products or services (broken down by age and sex) and lives improved in conflict-affected communities (also disaggregated). The targets were significantly exceeded.

number of people. As co-ordinators of aid in their areas, the Directorates also acted as gatekeepers to activities there. Field Ready signed a protocol with the Kilis Directorate concerning financial transfers and submitted reports on expenditure to it to ensure smooth operations and transparency, having secured registered status to obtain permission to operate in Turkey. Importantly, the CHIC team supported Field Ready's registration efforts in Turkey, which gave a basis for the protocol agreement and enabled it to operate.

Key actors in the innovation ecosystem relevant to Field Ready's local manufacturing approach – end-users and potential funders: The WHO-led Health Cluster, comprising all the major humanitarian actors and health providers in the region, co-ordinate all health provision in NW Syria and fund a significant amount of it and as such were key stakeholders for the project. As members of the health cluster, Field Ready attended monthly meetings and engaged in the partnerships working group. Their engagement with this co-ordinating body meant that they could publicise the service they offered, establish which were the critical hospitals needing their support and gain access to a number of new health facilities who it could thereby support with item repair and fabrication.⁴ Similarly, Field Ready's more recent membership of the Early Recovery Cluster was intended to better understand efforts being put into health system rehabilitation and the key actors in that work. Field Ready also engaged directly with individual local NGOs managing the hospitals with whom Field Ready wanted to work, to strengthen one-to-one co-ordination with them.

Delivery partners: Field Ready worked with several partners to deliver their services to both hospitals and manufacturers:

- Midmar, a training provider in NW Syria enabled Field Ready to reach and train more local manufacturers and bio-medical engineers than would have been possible otherwise.
- A professional media and communications company, contracted to provide videos, communications templates and formats to strengthen communication with potential partners.
- Private suppliers for technical services and equipment, strengthening the delivery team's capacity and understanding and informing the design of the training programme. One example is POINT, a Syrian-Turkish organisation who provided capacity building courses in project cycle management and M&E to local manufacturers, as well as legal advice to Field Ready about how to register in Turkey.

Implementing partners: Local manufacturers were fundamental to the Field Ready innovation model. Those interviewed said that Field Ready provided them with technical instructions and guidance and brought 'creative solutions' so that they could make products and components for medical device repair of sufficient quality. Examples included liquid inject flow control device, a sterilisation device and a motion sensor for the water tap in the operating theatre. Interviewees spoke of the professionalism of the Field Ready engineers they worked with, the resulting increase in the quality, speed and scope of their products, and the increased business the project had brought them while it was operating. Training was also provided to hospital technical staff on how to diagnose and fix problems with medical devices and with hospital medical staff on how to use them. The demand for and value of the engagement was further demonstrated when more than 450 participants (both local manufacturers and health facility maintenance staff) registered for two training events held over five days towards the end of the grant. This training was designed as a result of a needs assessment that Field Ready carried out.

⁴KII evidence although not corroborated by WHO themselves, to whom we were unable to speak.

⁵Quoted in Interim (Final) Progress Report, January 2022 – Field Ready study of 52 repaired devices

⁶Independent Evaluation: Making Essential Items in Syria (2022) p.9

⁷ Ibid.

At a programme level, Field Ready has founded the Local Procurement Learning Partnership (hosted by the Humanitarian Logistics Association) a partnership for mutual learning, knowledge sharing and co-ordination to build a solid policy and practice base for local procurement (modelled on the successful Cash Learning Partnership).

COST EFFICIENCY DEMONSTRATED

There is good evidence of cost efficiencies resulting from the Field Ready approach. A cost study⁵ showed that cost reductions on repair of devices ranged from 33% to 96% compared to repair by the usual methods, with an average cost reduction of 80%. The independent evaluation analysis of 83 devices found that Field Ready's method saved 66% more than traditional approaches (costing USD \$6,773 rather than USD \$20,123).⁶

Cost efficiencies also arose from the reduced repair time and the quality of the work. As reported in Field Ready's final progress report, 92% of the facility managers surveyed reported a shorter repair time due to the innovative approach, and 26% reported that it had saved between 15 days and one month of time. 100% of facility managers reported that the quality of the repair was 'very good' (64%) or 'good' (36%) and they were all either 'very satisfied' (46%) or 'satisfied' (54%) with the service. All respondents said that they would recommend the service to others. The independent evaluation similarly found stark reductions in timescales: a near halving of the total length of time taken to repair the 83 items analysed compared to traditional methods (371 days instead of 664 days).⁷

Finally, the triage/prioritisation process included a calculated cost benefit of every possible repair, to ensure that resources and effort were focused on those which would be most impactful. This element of Field Ready's approach is integral to the innovation itself (reinforcing the fact that this is a process innovation, not simply a product innovation) and recognises the importance of making informed decisions about where to engage, and the need to "concentrate the supply chain [effort] where imports are really needed", in the words of one interviewee.

Strength of Evidence: Strong

Evidence is from Field Ready progress reports, the independent evaluation, interviews with CHIC staff, Field Ready Staff, and practitioners and manufacturers in NW Syria. Evidence has been triangulated wherever possible.

INTERMEDIATE OUTCOME 3: INCREASED USE OF HUMANITARIAN INNOVATIONS AMONG THE MOST VULNERABLE POPULATIONS AFFECTED BY HUMANITARIAN CRISES CAUSED BY CONFLICT, AND/OR HUMANITARIAN WORKERS

This outcome focuses on innovation up take and use, and by whom. (The benefits arising from this are appraised in the value for money assessment of impact.) Indicators relate to end-users - in this case study patients benefitting from repaired equipment (immediate outcome indicator 3.1); intermediaries trained to provide or use repaired equipment (indicator 3.2) and successful deployment of the innovation as intended (immediate outcome indicator 3.1). This section assesses each of these and their significance in turn.

⁵Quoted in Interim (Final) Progress Report, January 2022 – Field Ready study of 52 repaired devices

⁶Independent Evaluation: Making Essential Items in Syria (2022) p.9

⁷ Ibid.

END-USERS

By the end of the grant in May 2022, Field Ready had recorded having reached 100,886 direct end users of Field Ready's repaired or manufactured health devices (58,800 female, 42,086 male). 60,054 of the those reached were children aged 19 and under (32,496 female, 27,558 male), and Field Ready estimate that 3,035 will have been persons with impairments (1,643 female, 1,392 male).⁸

These results significantly exceeded the original targets⁹ of 30,079 users (15,339 female, 14,740 male) of whom 12,426 children were aged 19 and under (6,337 female, 6,089 male).

A Field Ready progress report notes that gender is a consideration in prioritising repairs and that this contributed to the high proportion of female end-users.

TRAINED INTERMEDIARIES

In total, 28 health facilities and manufacturers were trained through the project. At the end of the project, 909 health staff were using or operating innovation products as intended (34% female health workers) and 270 healthcare staff trained in best practice of how to use or operate them (21% female).

INNOVATION DEPLOYMENT (INNOVATION UPTAKE AND ADOPTION)

Prior to deployment, Field Ready conducted a holistic needs assessment of the sites and the devices that were needed. They visited the large hospitals to assess needs, the level of priority of the facility in the area (e.g. number of patients visiting the hospital), and the need of the device in the hospital (e.g. number of patients needing the device, whether there are alternative devices, whether it was fixable, and whether it was more cost efficient to obtain a new device).

By January 2022, Field Ready had repaired and delivered 215 medical devices and 39 new products to 28 health facilities, 93% of which were functioning well at the six week follow up visit. Those not working as intended were fixed. The devices were used an average of 27 times and for 3-4 hours per day. Some examples of devices delivered include ambulance ventilators, ECG equipment, oxygen concentrator, nebulizers, ultrasound V-scans, nerve detectors, and X-ray devices.

Field Ready worked closely with the facilities and facility managers, who were seen as key to Field Ready's operations. Field Ready regularly sought feedback from the users of the devices delivered to improve the quality of products and processes. Local facility managers expressed their appreciation for Field Ready's support, which benefitted not only field doctors and nurses, but also engineers and maintenance staff on site. This appreciation was seen through the increasing number of requests for Field Ready's support from new and existing health facilities (and hospitals) and their staff and uptake of the services offered by many. (28 health facilities were reached in total). Partners report there being no alternative to Field Ready's services, who provided them with cheaper, quicker and higher-quality repairs and replacements compared to their prior procurement methods through Turkey. Although wider adoption of Field Ready's approach may not have been achieved during the lifetime of the CHIC grant, Field Ready proved that adoption of their model for local repairs and new devices is achievable as well as faster and cheaper - there is no need to ship in equipment every time an item is broken. There are now people with the right skills to repair equipment within communities in NW Syria and they demonstrated that there is a demand for more repair and fabrication services.

⁸Field Ready used UNDP's People with Disability estimates in their region of operation to calculate this figure.

⁹See Field Ready's Grant Agreement (Attachment D) Results-based Management Accountability Framework

Strength of Evidence: Strong

Evidence is from Field Ready progress reports, the independent evaluation, interviews with CHIC staff, Field Ready staff, and practitioners and manufacturers in NW Syria. Evidence has been triangulated wherever possible.

INTERMEDIATE OUTCOME 4: Humanitarian ecosystem is strengthened: humanitarian actors, innovators and other key stakeholders demonstrate uptake of CHIC learning / technical assistance outputs

This outcome focuses on how CHIC strengthens the humanitarian ecosystem through stakeholder engagement with 'CHIC-facilitated learning or capacity building activities'. (intermediate outcome indicator 4.1). The impact of the innovation itself on the humanitarian system is examined in the value for money assessment.

There are several examples of learning about Field Ready's approach to local manufacturing being shared with actors in the humanitarian ecosystem, such as donors, researchers, and other innovators, by CHIC and by Field Ready themselves. At this stage, there is little evidence of uptake of this learning leading to discernible strengthening of the humanitarian ecosystem and therefore achievement of the outcome. (Examples of ecosystem strengthening could include change in policy or practice in relation to local manufacturing or funding decisions, initiatives on local manufacturing by humanitarian agencies and funders; or discourse on the topic in decision-making fora, which could take place at a global, regional or national level.)

- Field Ready presented their work within the health cluster in NW Syria and engaged with cluster members through meeting attendance. Hospitals with whom they were put in touch through the cluster were willing to use Field Ready's services and did so. However, cluster membership did not lead to wider or longer-term uptake or any change in humanitarian funding modalities to enable purchase of Field Ready's services beyond the end of the CHIC grant.
- Field Ready took part in a webinar to share the challenges and lessons learned from local manufacturing with other CHIC-funded innovators. They were also on the panel for a facilitated discussion on innovation adoption at the Grand Challenges Annual Meeting in October 2022, which was attended by other innovators and humanitarian stakeholders such as Elrha, representatives from UNHCR and government donors.
- As noted under IOC1, Field Ready have founded the Local Procurement Learning Partnership (see VfM Impact 3 below), participate in research and webinars on the challenges of local manufacturing (for example with Reach Alliance to whom they were introduced by CHIC), regularly share success stories on social media, speak to known donors and networks, and have widely published the evidence obtained from the external evaluation commissioned during the CHIC funded project.
- CHIC shared information about the innovation with donors, for example in the context of the crisis in Ukraine, leading to further discussions.

Strength of Evidence: FAIR

Evidence is limited. Evidence from interviews with CHIC staff and Field Ready staff were triangulated wherever possible.

UNFORESEEN INTERMEDIATE OUTCOME LEVEL RESULTS

Health staff developed skills to maintain and use devices When delivering new and newly repaired devices, Field Ready found that some staff did not know how to use the device - and other devices - in their facility. By training these staff on how to operate them, Field Ready build additional and valuable capacity of health teams working in the hospitals they served.

Improved mental health Facilities managers reported that having functioning medical devices provided by Field Ready positively affected patients' mental health. Prior to Field Ready's support, a lack of medical devices meant that doctors were having to prioritize patients with urgent care requirements and leave others to wait until space was available. Field Ready's devices reduced these waiting times and (presumably) attendant worsening of the patient's condition and stress levels of both the patient and their family.

Reached vulnerable groups included those who were previously unable to access healthcare at all, or who could do so only at very great cost. Prior to Field Ready's presence, a lack of devices in local medical centres meant that patients and their families were not able to get the care they needed or, if they could afford to, had to travel long distances to access it. For those living in camps for internally displaced people and/or those who were particularly vulnerable, who would not have had the option of travelling to seek care however great their need, Field Ready's impact was particularly important and meant they could now access the care they needed. For those who previously would have travelled to seek care, it meant their families did not have to bear the negative economic and social impact of two or more family members leaving the home for long periods of time.

Contributing to the local economy Field Ready has the potential to contribute to the local economy by creating new opportunities for local actors who are involved in the co-creation of products – as in fact is recognized by their project results framework, although not by programme level outcomes. A key part of the project was capacity building of local manufacturers. The manufacturing workshops they used to provide supplies during the project received training on new machinery (such as 3D printers) and product quality assurance. These manufacturers are now more qualified to seek work going forward. There was high interest in digital manufacturing from small workshops and one manufacturer reporting having generated more income because of the training he received. Furthermore, Field Ready's makerspaces remain in situ, equipped and available to local manufacturers. However, as discussed in the VfM Impact I section below, the potential benefits accrued by local technicians, engineers and businesses is limited by the extent to which local hospitals receive continued funds to use local manufacturers for the repairs and procurement.

Reduced device cost for health facilities Low numbers of qualified engineers has led to private workshops having a monopoly on health supplies in Syria. It was suggested in a progress report that by increasing the number of suppliers which health facilities can go to and providing new or repaired devices for free, Field Ready could potentially put pressure on the market to reduce the cost of devices supplied by private workshops and thus increase their affordability for health facilities.

Reducing environmental costs in health service delivery Although this case study was unable to quantify the environmental benefits of Field Ready's work in Syria, there are undoubtedly potential benefits

associated with their model. By reducing the import of humanitarian supplies, Field Ready's work reduced the carbon footprint which would otherwise be incurred (through transport emissions and packaging for example) for each item supplied or repaired.¹⁰ The Cost Effectiveness study prepared by CHIC explores these issues and concludes that "Field Ready is adding significant environmental value through its locally grounded humanitarian operations".¹¹

Strength of Evidence: Fair

Evidence for each unforeseen outcome is limited to one source only and therefore has not been triangulated.

CHIC CONTRIBUTION TO RESULTS

CHIC provided a unique funding opportunity for Field Ready through its explicit remit of funding humanitarian innovation in conflict settings, a niche which few existing donor programmes fill. CHIC's grant of \$1,000,000 CAD between 1st January 2020 to 31st May 2022 (including a five-month no-cost extension) enabled Field Ready to expand their operations in NW Syria and document the real potential of their model through an independent evaluation. The independent evaluation demonstrates that localization at scale is possible, and that it has the potential to save costs, deliver health care in conflict settings faster, and make healthcare more accessible to vulnerable groups. The evaluation now forms a key part of Field Ready's ongoing fundraising and advocacy materials.

The technical assistance and flexibility provided by CHIC were also important for the successful implementation and scale of the project. CHIC provided a Gender Equality consultant to conduct a gender equality audit that identified strengths and areas for improvement in their overall gender equity strategy. The support provided led to improved gender sensitivity in Field Ready's needs assessment and project design processes (see Outcome 3 for details). Field Ready also worked with a venture adviser through WFP (CHIC's technical assistance partner) with a view to developing a commercialization plan.

In addition to this tailored support, and advice on partnerships and operations in Turkey, generic support in which Field Ready participated included quarterly town hall discussions, pitch events, speed networking sessions, TTS strategy labs, deep dive sessions, innovator-led events, innovator accelerator weeks, mentor days and an M&E community of practice, where Field Ready's MEL staff member contributed to the discussions on feminist M&E.

In terms of wider advocacy, CHIC facilitated innovator-to-innovator collaboration among their grantees as a result of which, Field Ready won further CHIC funding in a joint project with two other CHIC grantees. At the time of writing, Field Ready was to participate in Reach Alliance's academic research on the localization of aid as set out in section IOCI, following an introduction from CHIC, and CHIC frequently refer to Field Ready's innovation when speaking to donors and their network.

Strength of Evidence: Strong

Evidence is from Field Ready progress reports and interviews with Field Ready staff and CHIC staff. Evidence has been triangulated wherever possible.

¹⁰Field Ready (Sept 3, 2020) Field Ready's way reduces harmful environmental impact. (blogpost) <https://www.fieldready.org/post/field-ready-s-way-reduces-environmental-impact>

¹¹CHIC-HGC (2021) Field Ready Cost Effectiveness Case Study. (p3)

4. LESSONS LEARNED AND CHALLENGES

Systemic barriers to innovation sustainability Field Ready's initial sustainability plan was a handover to local operators. Field Ready intended to train local biomedical engineers in their approaches to repair and fabrication and conduct a network mapping exercise that would connect manufacturers with hospitals and health clinics, so that local repair and fabrication could continue, even without Field Ready organizing and implementing the services. The reality was not conducive – they found that it is easier to get donor support for new machines than for device repairs. Indicators used by members of the OCHA health cluster focus on number of new devices coming into Syria and there are no indicators for 'alternative for number of repairs' or 'successful cases of equipment maintained', for example. Even once the connection between health clinics and their suppliers was made, the service could not continue without Field Ready's presence and funding of repairs, because the hospitals and health clinics were operating with a severe shortage of funds and could not pay for the services, stemming, in part, from restrictive budget lines that did not allow for such costs.

Furthermore, despite local demand being high and fundraising efforts continuing, Field Ready themselves were unable to secure longer term funding to maintain the infrastructure and services they set up. Multiple grants finished at the same time, leading to closure of all project activities and an inability to continue to pay staff salaries. Near project end, Field Ready's fundraising efforts were met with the additional challenge of the escalating conflict in Ukraine: this became a high priority for donors and diverted funding away from other humanitarian and development programming, including potential Field Ready projects.

Whilst funds were available at the ideation and testing phase, Field Ready now face the challenge of obtaining core funding for a programme designed to operate in a conflict setting when there are pressing and urgent demands on a reducing amount of overseas development assistance.¹² It is difficult for innovations based in conflict settings to be commercially viable because they provide a vital service that would otherwise be funded through public systems, such as the public healthcare system, and there is no alternative funding source for such services in the midst of a conflict. Innovation funds need to consider what their strategy will be to support successful innovations to obtain core funding once the innovation has moved beyond the innovation phase.

Need for a focus on advocacy – at programme and project level One solution innovation programmes can offer to the problem diagnosis above is a strong focus on advocacy in programme design. As an international system-level stakeholder, innovation funds are in a unique position to systematically petition for aid agencies and donors to take up the solutions being offered by their successful innovators and supplement the advocacy already being undertaken by innovators themselves – as CHIC have done to some extent. (Field Ready for example have used the Humanitarian Network and Partnerships Week to speak to a potential donor.) Equally, CHIC could provide advocacy expertise to support innovators in developing advocacy strategies at the local, national and international level as appropriate, and funding to execute these.

Hiring female staff in conflict settings as a strategy for strengthening gender equity presents particular challenges Field Ready's aim was to include gender equity in all aspects of their work. However, they faced challenges in hiring female staff members due to unique security risks faced by women in NW Syria when

¹² For example, the UK's Overseas Development Assistance budget fell 21% in 2021 compared to 2020, reduced further in 2022 and is under continuing pressure. Future private sector innovations may confront similar challenges in working with humanitarian organisations and corporations and could learn from EPP's experience of overcoming these.

passing through checkpoints. This means alternate and conflict sensitive approaches are needed if gender equality is to be mainstreamed effectively by interventions. These could be explored with technical expert support from CHIC, for example.

Need for local registration Operations in NW Syria can be given essential legal cover, aiding logistics and security, by registering in Turkey. Field Ready realized the need for this and secured registration relatively early on during the grant, with the support of both CHIC and local legal advisers. The lesson is to ensure that future innovations similarly realize this need early on and build it into their plans.

5. IMPACT AND VALUE FOR MONEY ASSESSMENT: OVERVIEW AND RATIONALE

ASSESSMENT CRITERIA

An assessment is made of the innovation's impact using the three impact criteria in the revised CHIC logframe. These criteria have been slightly rewritten for the purposes of VfM assessment:

• to clarify that innovation benefits are defined and assessed by the intended beneficiaries and users of the innovation

- to clarify that benefits includes social and environmental benefits
- to take into consideration social and environmental costs
- to ensure a cross-cutting assessment of equity.

The logframe impact criteria have been re-ordered 1,3,2 as this is a more logical sequence for analysis.

Impact 1: Innovation Costs and Benefits

To what extent has the innovation brought net benefits to conflict-affected people (that is, the benefits experienced by beneficiaries outweigh any costs experienced by either beneficiaries or users) – 'benefits' here meaning benefits that have increased survival or improved lives.

To the extent that the innovation has brought benefits, it is a successful project.

Impact 3: Innovation Adoption in the humanitarian system

To what extent is the innovation spreading beyond its pilot location and is contributing to product, process or system-level change in the humanitarian system (or is on a pathway towards doing so)?

To the extent that the innovation is both a successful project (Impact 1) and is being adopted more widely (Impact 3), it is a successful innovation.

Impact 2: Increasing the Efficiency and Cost-Effectiveness of humanitarian assistance

To what extent does (or might) such change increase either the efficiency or cost-effectiveness of humanitarian assistance?

INNOVATION VALUE FOR MONEY ASSESSMENT

What were HGC's initial expectations for the innovation's impact? This is the implicit VfM Benchmark.

The grant was made in the expectation that the innovation would demonstrate an impact (defined by the three impact criteria) as anticipated in the Grant Application. HGC was making the claim that if the innovator meets these expectations, this represents good value (= impacts) for money (the grant + TA). {Note that this logic depends on demonstrating that the HGC grant made a significant contribution to the innovator's achievement of results – this is covered in the Contribution section of the Case Study}

How does each impact measure up to CHIC's expectations? Compared with benchmark, is the impact assessed as sub-optimal, good or very good, taking context into consideration?

The benchmark may be imprecise and circumstances will throw up obstacles and/or enablers to the achievement of impacts, hence this will be a judgement call, supported by reasoned argument.

The Value for Money Assessment

The VfM of the innovation is sub-optimal, good, or very good to the extent to which the innovation's overall impact is assessed as sub-optimal, good or very good overall.

LOGFRAME IMPACT I:

Increased survival and improved lives among the most vulnerable populations affected by humanitarian crises caused by conflict through the implementation of humanitarian innovations.

- What benefits has the innovation brought to conflict-affected people, either directly or indirectly, and were they distributed equitably? Has it brought environmental costs or benefits?
- What costs or downsides have been experienced by beneficiaries or users of the innovation?
- Does the innovation deliver a significant net benefit (that is, benefits taking costs into consideration) that increases survival or improves lives of conflict-affected people?

ACHIEVEMENTS AGAINST TARGET

Field Ready very significantly exceeded expectations for lives improved through their innovation, exceeding their target six-fold, by 49,823. 59,645 patients had measurable health improvements attributable to use of innovation products of whom 34,390 (58%) were female,¹³ against a target of 9,822 patients (51% female).¹⁴

BENEFITS DURING THE PROJECT TIMEFRAME

The principal benefit has been to over 100,000 patients of health facilities who have received life-saving or life-improving treatment from clinicians using Field Ready-supplied items, treatment which would not have been possible, or would have been delivered to a significantly lower standard, without them (examples would be where Field Ready repaired a steriliser and an incubator).¹⁵ Field Ready's repairs received very high satisfaction ratings from users (100% reported being 'satisfied' (54%) or 'very satisfied' (46%)).¹⁶ These propositions have been validated both by Field Ready's own methodologically rigorous monitoring and by an independent evaluation.¹⁷

Field Ready's monitoring is gender-disaggregated and shows that benefits have been experienced by a higher proportion of women than men (see above and also Outcome 3).

270 health facility staff have benefitted from training and capacity building to operate items and keep them in working order, and together, 909 health facility staff were using the items as intended, thus increasing the effectiveness of their health facility.¹⁸

Local engineers and technicians have been exposed to new ways of repairing and fabricating items, and a new potential market (health facilities), leading to an unquantified economic benefit to local businesses.

The question of whether users (health facility staff or patients) have experienced any costs or downsides has been explored to a limited extent with Field Ready and a few local informants; none have been mentioned.¹⁹

¹³Field Read Progress Report January 2022

¹⁴Field Ready Grant Agreement Attachment D – Results-based Management Accountability Framework

¹⁵"The sterilizer in our facility had been broken for 18 months and local workshops could not fix it – it would probably take years to get a sterilizer from abroad. When Field Ready's team intervened, they were able to fix it in only eight days." - Healthcare Facility Manager, Saqin sub-district, Idlib Governorate, quoted in the independent evaluation cited above, page 6.

¹⁶"Through Field Ready's approach, (an) incubator (that cost \$2,500) was repaired locally and brought back into use for \$700 USD." - Healthcare Facility Manager, Dana sub-district, Idlib Governorate, quoted in the independent evaluation cited above, page 10.

¹⁷Field Ready Data and Analysis. Final report Annex C. January 2022

¹⁸Tamman, Dr. A (March 2022) Field Ready Independent Evaluation

¹⁹Ibid.

¹⁹The issue of costs or downsides was raised with CHIC and with some Field Ready informants and answered in the negative. Local informants did not mention any costs or downsides when asked generally about benefits; however, the question of costs or downsides was not asked explicitly, due to the need to prioritise questions in a limited interview time

Carbon reduction benefits. Field Ready's analysis indicates that local repairs and fabrication generate lower overall carbon emissions than international procurement, largely because of the carbon costs of international transportation.²⁰ Field Ready was not able to quantify the reduction in carbon emissions.

Overall, the innovation delivered very significant benefits for patients, healthcare facility staff and their facilities, and for local engineers and technicians during the lifetime of the project, with some small concomitant carbon savings (unquantified).

BENEFITS ENDURING BEYOND THE PROJECT TIMELINE

It is assumed that the benefits of repaired items continue as long as the equipment keeps working and being used, but the benefits outlined above arising from the repair of any further equipment came to an end with the closure of the project at the end of May 2022.

With the end of the grant, Field Ready's service to health facilities ended and staff were either stood down or redeployed to other donor-funded projects. Health facilities have now reverted to cross-border ordering of spares and replacements as was the practice before the project. Potentially, health facilities could contract local manufacturers directly to repair items if they controlled a budget line for this purpose, but they do not and are subject to donor / INGO restrictions on both budget value and expenditure practice. In the final months of the project, Field Ready mapped all the repair facilities to facilitate direct bilateral communication with health facilities and hence their continuing use to repair items, but at the time of writing, this communication has not happened. Broadly, humanitarian funding, on which health care in NW Syria is dependent, is tied to international procurement agreements not local manufacturing. The small number of interviews conducted by Triple Line with local stakeholders in June 2022 confirms previous reports that there is strong wish for the service to continue among both health facilities and local manufacturers, and frustration that it has ended.

The interviews also confirm that both health facility staff and local manufacturers value the technical knowledge and skills they have gained from Field Ready's training; this is a (somewhat minor) enduring benefit – but it is frustrating for all involved that those skills cannot be put to use in the context of a local repair market.

Unfortunately, no follow-on grant or other form of funding in Syria has yet materialized. Field Ready have not been able to secure additional funding to continue their work in NW Syria despite several advanced conversations and funding applications with potential donors in a context of disincentives in the humanitarian funding system for such work, cuts in development assistance and diversion of funds into other emergencies.

This situation illustrates one of the many sustainability challenges arising from running an innovation program in a severely conflict-affected context like Northwest Syria, amidst a humanitarian funding landscape with finite resources and limited incentives to change established ways of working, and where private sector scaling pathways prove to not be the first or most appropriate avenue towards sustainability. Despite the tremendous potential for enduring life-saving impact and strong local uptake and acceptance for the innovation, significant challenges remained that barred further progress and highlights the need for more tailored innovation advocacy and fundraising strategies to maximize the potential for success and better support innovators to continue to meet the needs of vulnerable populations. CHIC's

²⁰CHIC (Dec 2020) Field Ready: Cost-Effectiveness Case Study

role in promoting these is discussed below in the final section under VFM Assessment: Impact 3: 3.2 'Adoption'.

Although beyond the scope of the data collection period of this case study, it is important to note there has been progress that demonstrates Field Ready's enduring benefits following the February 6, 2023 earthquake that struck southern Turkey and Northwest Syria. The invested capacities in the Syria project enabled the Field Ready Turkey team to rapidly respond to earthquake response efforts; equipment and devices that were repaired as part of the Syria project are being used in earthquake response efforts and Field Ready continues to scale up their production of "rescue airbags" made from locally recovered and recycled materials to raise heavy debris and retrieve bodies trapped beneath collapsed structures.

Potential benefits from programmatic funding of Field Ready and donor funding of local repairs

Programmatic medium- to long-term funding of the Field Ready operation in NW Syria would (as long as it lasted) restore a programme that delivers immediate and demonstrable life-saving and life-improving benefits. This has not (yet) been forthcoming.

To the extent that donors begin to switch funding from international to local procurement of repairs and replacements, they will advance localization and reduce overall logistics costs (both these aspects are discussed further below). This has not yet been seen.

Overall, to the extent that health facilities can:

- keep their equipment operational longer, as a result of training provided by Field Ready, and
- make use of budget lines for local repair and fabrication funded by donors, and
- access a supplier network of competent local manufacturers to get items repaired and replaced
- then it can plausibly be inferred that NW Syria's health sector will be more resilient to the effects of the siege imposed on it by the continuing Syrian conflict.

IMPACT 3: INNOVATION ADOPTION IN THE HUMANITARIAN SYSTEM

Logframe Impact 3:

Contribute to and foster systems change within the humanitarian ecosystem.

- What product, process or system-level change in the humanitarian system is the innovation contributing to (or is in a pathway to do so)?
- To what extent has the innovation spread beyond its project location and what is the pathway to wider adoption?

3.1 WHAT PRODUCT, PROCESS OR SYSTEM-LEVEL CHANGE IN THE HUMANITARIAN SYSTEM IS THE INNOVATION CONTRIBUTING TO (OR IS ON A PATHWAY TO DO SO)?

Field Ready's innovation in local repair of medical devices is potentially a system-level change of wide application in the following respects:

3.1.1 Humanitarian Logistics

The innovation has the potential, if widely adopted, to reduce the use of international procurement agreements and supply chains and increase the use of local procurement and supply chains leading to

- a) procurement economies and efficiencies (items of appropriate quality procured at lower cost and delivered through shorter supply chains more quickly)
- b) performance gains for local actors, such as health facilities, which can operate more effectively, with consequent benefits to affected populations, and
- c) reduced carbon footprint of the humanitarian response.

The approach is not restricted to health repairs and replacements: other sectors where the approach has potential include WASH, shelter and nutrition.

This potential is greatest in settings where supply chains are disrupted or costly, such as geographically remote areas and conflict-affected areas, and where there is an existing repair/manufacturing infrastructure capable, with some external support, of pivoting to the supply of humanitarian outputs. There will be much less scope for the innovation to demonstrate cost and time savings where supply chains are working smoothly, and international procurement can deliver competitive prices and/or economies of scale.

Although this is not spelled out in exactly these terms, the system level change that Field Ready hopes that its approach will ultimately lead to is a process change in which donors and logisticians routinely assess, for any given setting, which items or classes of items are best sourced internationally and which locally – and routinely fund local procurement and provide support for the local repair/manufacturing infrastructure to fulfil its potential. (Note that it has never been Field Ready’s contention that local repair/fabrication replaces international procurement; it is seen as complementary.)

3.1.2 Localization

The innovation promotes localization in the sense that local actors (such as health facilities) will, on the basis of an assessment, procure at least some items from local businesses of their choice, enhancing their autonomy, while on the supply side, local businesses will benefit, enhancing the local economy, with potential implications for local resilience and recovery (see Unexpected Outcomes section).

3.2 TO WHAT EXTENT HAS THE INNOVATION SPREAD BEYOND ITS PROJECT LOCATION AND WHAT IS THE PATHWAY TO WIDER ADOPTION?

In NW Syria, Field Ready worked across both the Turkish-controlled zone and the zone controlled by Syrian opposition forces, reaching a wide array of health facilities. Globally, Field Ready’s innovation, working with local actors to manufacture critical humanitarian supplies when and where they are needed, has been successfully replicated in a range of humanitarian contexts including in Syria, Iraq, Jordan, Turkey, Kenya, South Sudan, Haiti, the US Virgin Islands, Nepal, Fiji and Vanuatu.

Field Ready’s scaling plan is focused on changing the way logistics is thought about and organized by aid agencies, supported by humanitarian funding, in particular donor funding. Key to the success of this strategy is solid evidence for Field Ready’s core proposition: that the approach does in fact deliver high quality items more quickly and cheaply (on average) than can be achieved using the traditional route. The CHIC-funded NW Syria project generated the first large-scale, methodologically robust, independent assessment of the core proposition and its intended benefits. The assessment was highly positive and has been noted by some donors. Field Ready has now demonstrated impact and see this as a game changer. Equipped with this validation, Field Ready aims to secure programmatic, as distinct from innovation, funding for the approach.

Further, Field Ready has founded the Local Procurement Learning Partnership (hosted by the Humanitarian Logistics Association) a partnership for mutual learning, knowledge sharing and co-ordination to build a solid policy and practice base for local procurement (modelled on the successful Cash Learning Partnership).

Field Ready's strategy is entirely within the not-for-profit space. With support from CHIC through the WFP Innovation Accelerator, Field Ready explored the idea of a commercial spin-off, but concluded that this was not a viable route in Syria because of the health facilities' inability to pay.

IMPACT 2: INCREASING EFFICIENCY AND COST-EFFECTIVENESS OF HUMANITARIAN ASSISTANCE

Logframe Impact 2:

Maximise value for money by increasing the efficiency and cost-effectiveness of humanitarian assistance

To what extent may (or might) the innovation either:

- Increase the efficiency of humanitarian activities (through, for example, reducing costs of certain common humanitarian outputs), or
- Increase the cost-effectiveness of humanitarian actions (through, for example, improving outcomes (while keeping costs low) from certain humanitarian interventions?

As noted above, under Impact 1, the Field Ready approach demonstrates clear efficiency gains (efficiency here in the wider sense to include the FCDO definition of economy, thus comprising both cost of inputs and the delivery of humanitarian outputs) and reduced carbon emissions.

The independent evaluation made a systematic assessment of (a) the cost of repair, and (b) the number of days taken for repair, for a sample of 83 (out of a total of 215) devices repaired by Field Ready, compared with the costs and time taken for repair by traditional methods. The evaluation found (a) that the aggregate costs of the Field Ready repairs was 34% of the cost that would have been incurred by traditional methods, and (b) that the aggregate number of days taken for these repairs was 56% of what would have been required using traditional methods. The independent evaluation found that in 70% of medical centres, Field Ready's maintenance and repairs were more precise and of higher quality than those of traditional maintenance suppliers.²¹ As noted above, Field Ready's monitoring, triangulated by the independent evaluation, validates the proposition that health outcomes were significantly improved, at lower cost: a clear cost-effectiveness gain.

The independent evaluation surveyed 20 (out of a total of 28) healthcare facilities in receipt of Field Ready repaired or fabricated equipment; 85% of the sample saw enhanced patient care abilities as a direct result of the project.²²

To the extent that the approach is widely adopted, widespread efficiency and cost-effectiveness gains are possible.

²¹ Independent Evaluation, p. 9 - 10

²² Independent Evaluation, p. 9

What were CHIC's expectations for the innovation's impact? This is the implicit VfM Benchmark.

How do the impacts measure up to CHIC's expectations? Compared with benchmark, is the impact achieved rated as sub-optimal, good or very good, taking context into consideration?

VfM Assessment: The innovation is assessed as representing sub-optimal, good, or very good value for money overall.

IMPACT 1: INNOVATION COSTS AND BENEFITS

Expectations and Achievement

CHIC's expectation for Field Ready in broad terms were set by Field Ready in the grant application as follows:²³

- 1.Reduced morbidity/mortality of affected people by providing essential items on demand effectively bypassing traditional supply chains
- 2.More people helped more quickly as locally made items are cheaper (50% on average) and faster (from weeks or months to hours or days)
- 3.Overcome market barriers preventing local manufacturers from making essential items by using an innovative approach
- 4.Increased resilience against the shocks of future disasters
- 5.Carbon benefits from reduced transportation

As discussed above under Impact 1, all except the fourth of these expectations have been met, while the fourth is an inference from the other points, noting that it has not been explicitly assessed.

CHIC's results framework for Field Ready sets quantitative targets as follows:²⁴

Outcome 1: 10,000 lives saved or improved as a direct result of the items manufactured as part of this project.

Outcome 2: 30,000 people access the innovation, i.e., all those who benefit from medical care provided as a direct result of the items produced.

Field Ready has considerably exceeded these targets. As discussed in the CHIC Semi-Annual Report, October 2021 – April 2022,²⁵ 100,886 patients have accessed locally-repaired medical devices and critical equipment,²⁶ of which, 59,645 patients have benefitted from life-improving medical care using the repaired devices.

Assessment:

Field Ready has very considerably exceeded expectations and hence value for money is assessed as Very Good.

²³ Field Ready TTS Grant Application, Project Summary, p.18

²⁴Field Ready TTS Grant Application, Section E: Anticipated TTS Outcomes and Outputs. This provides the following explanation of terms: 'For the purpose of this project, 'lives saved' is defined as the number of people for whom receipt of medical care is highly likely to make the difference between life and death, and 'lives improved' is defined as number of people for whom permanent negative health outcomes are prevented through provision of emergency, urgent, or semi-elective healthcare. To differentiate between access to the innovation and additional impact in terms of lives saved/improved, a distinction is made between items that enable directly life-saving/life improving treatment to be provided, and those which enable improvements in quality of healthcare provided which have a measurable impact on lives saved/improved.'

²⁵Externally validated by independent assessment

²⁶HGC Semi-Annual Report, October 2021 – April 2022, page 4.

3.1 HUMANITARIAN SYSTEM CHANGE

Expectation and Achievement

As alluded to in the grant application, Field Ready aims to bring about systemic change in the way humanitarian logistics are conducted, with concomitant localization benefits. The CHIC-funded Syria project provided a case study that validated this aspiration convincingly.

Assessment:

Field Ready more than met expectations; value for money assessment: Very Good.

3.2 ADOPTION

Expectation and Achievement

CHIC's expectation for Field Ready's development beyond the NW Syria project was that Field Ready would 'Develop and implement a revenue diversification plan ... to diversify income towards long-term sustainability.'²⁷ The issue of more widespread adoption of the innovation was thus framed as a business sustainability issue. No target was set and as mentioned above, Field Ready, having explored the issue in the WFP Innovation Lab sessions, have not pursued commercialization in the Syria context.

Field Ready report a high level of satisfaction with the donor relationship-building and informal advocacy opportunities made possible by the CHIC grant and is hopeful that these will lead to programmatic funding and further advocacy opportunities aimed at shifting mindsets and budgets as discussed above. The external evaluation which was funded, endorsed and promoted by CHIC, is key to this.

Beyond this, however, there remain opportunities to develop a more tailored or formal advocacy strategy aimed at promoting the system level change discussed above, where clearer allocation of responsibilities between CHIC and Field Ready of roles and targets can be defined, as well as further clarity about what contribution Field Ready might make to wider adoption / humanitarian system change through their project and/or key constraints to reach this aim and ways in which CHIC can complement these efforts. Moving forward, it would be useful for CHIC to consider how to more clearly define and carry through effective advocacy and fundraising on behalf of the innovations they promote.

Assessment:

No expectations were set up; consequently, no VfM assessment is possible.

IMPACT 2: INCREASING EFFICIENCY AND COST-EFFECTIVENESS OF HUMANITARIAN ASSISTANCE

Expectation and Achievement.

Field Ready has a clear value proposition, which leads to the clear expectation of efficiency and cost-effectiveness gains (at whatever scale the innovation is deployed). Field Ready's monitoring, triangulated by the independent evaluation, confirms that this expectation is met.

Assessment:

Field Ready has more than met expectations and hence value for money is assessed as Very Good.

²⁷Field Ready Grant Agreement, Attachment B: Project Description, page 21.

OVERALL VALUE FOR MONEY ASSESSMENT

Overall Assessment:
Given this analysis, we assess the overall value for money of the Field Ready grant as Very Good.

Annex I. Evidence Sources

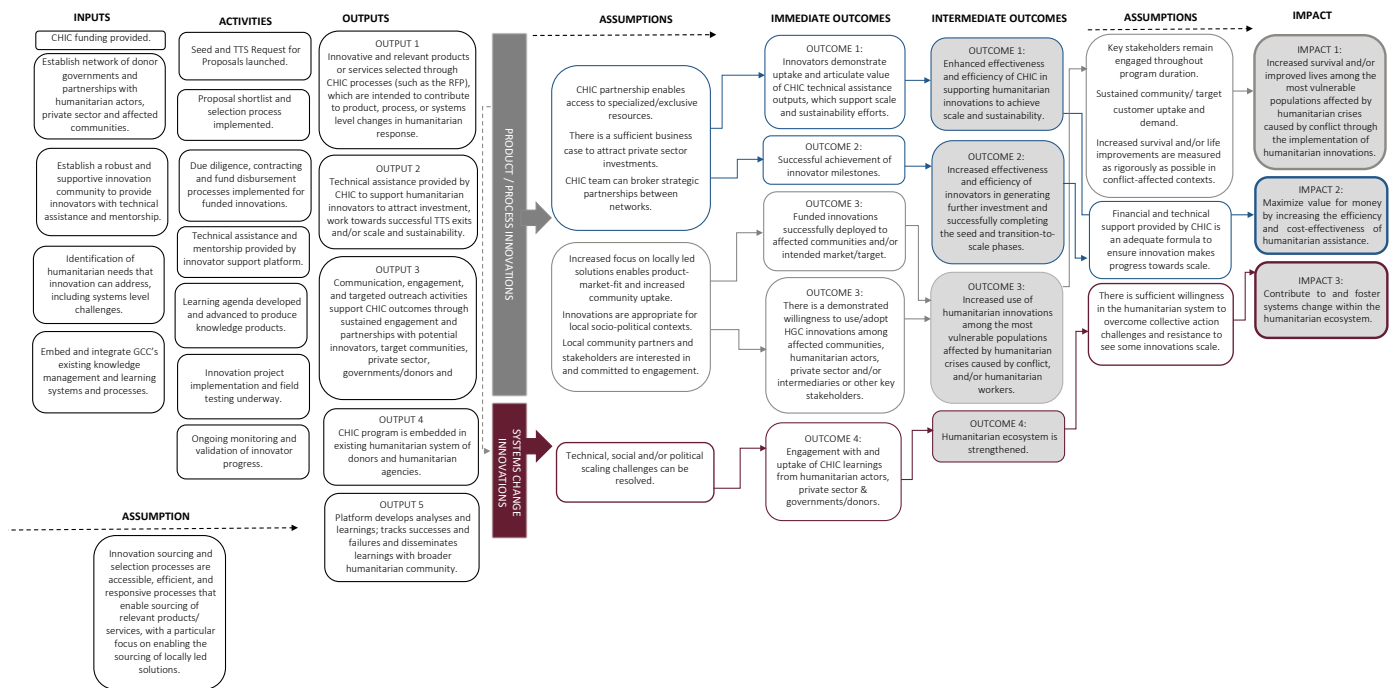
LIST OF PEOPLE INTERVIEWED		
Name	Organisation	Position
Eric James	Field Ready	Executive Director
Emad Nasher Alneam	Field Ready	Programme Lead
Rached Abu Tayeh	Field Ready	Regional Impact Lead
Andrew Lamb	Field Ready	Technical Advisor
Nachiket Deval	Grand Challenges Canada	Investment Manager
Elizabeth Assefa	Grand Challenges Canada	Investment Associate
Zainah Alsamman	Grand Challenges Canada	Program Officer
Nael Jawad	UOSSM (Partner NGO)	Supply Chain Manager
Omar Balkash	Haritan Hospital	Maintenance Technician
Mohammad Lula	Al-Fardous Hospital	Admin Manager
Abdulrahman Hallak	Alnour workshop	Manufacturer/Engineer
Hassan Jaddou	HK Tronex engineering company	Owner

BIBLIOGRAPHY
<ul style="list-style-type: none"> • CHIC annual report (April 2022). Available at https://humanitariangrandchallenge.org/research-learning-reports/ • CHIC semi-annual report, Oct 21-April 22 (2022) • CHIC Grantee Database (Jan 2022) • WFP Innovation Accelerator Semi-Annual report (April 2020) • WFP Innovation Accelerator Semi-Annual report (Oct 2020) • WFP Innovation Accelerator Semi-Annual report (Oct 2021) • Transition to Scale Lead Recommendation (2020) • Field Ready – CHIC Grant Application (2019) • Field Ready – CHIC Grant Agreement (2020) • Field Ready progress report (Jul 2020) • Field Ready progress report (Jan 2021) • Field Ready progress report (Jul 2021) • Field Ready progress report (Jan 2022) • Field Ready RMAF (Jan 2022) • Field Ready Cost Effectiveness Case Study (2021). Available at https://humanitariangrandchallenge.org/research-learning-reports/ • Independent Evaluation: Making essential items in Syria (2022) • Field Ready Rapid Site Assessment Tool (May 2022) • Field Ready Cost Data and Analysis (Jan 2022) • Field Ready Revenue Diversification Plan (Jul 2021) • Field Ready website (Accessed June 2022). Available at: https://www.fieldready.org/syria • Field Ready Annual Report (2020). Available at: https://www.fieldready.org/overviewdocs • Shrinking the Supply Chain: Hyperlocal Manufacturing and 3D printing in Humanitarian Response (2015). Available at https://www.unocha.org/es/publication/policy-briefs-studies/shrinking-supply-chain-hyperlocal-manufacturing-and-3d-printing • Obrecht, A et al. (2016) More than just luck: innovation in humanitarian action HIF/ALNAP Study. London: ALNAP/ODI

Annex 2. Strength of Evidence Assessment Criteria

STRONG	FAIR	WEAK
Evidence is coming from multiple data sources or one highly reliable one, and is triangulated with feedback from external stakeholders	Evidence is coming from multiple data source or from one highly reliable data source (e.g. progress report) but could not be triangulated with feedback from external stakeholders	Evidence is mostly from one data source and could not be triangulated with feedback from external stakeholders (i.e. stakeholders other than the innovators of CHIC)

Annex 3. CHIC Theory of Change



PROBLEM | As the length, frequency, and scope of the world's conflicts increase, it is becoming more difficult to reach affected people in insecure areas with life-saving and life-improving humanitarian assistance. New and scalable solutions are needed that respond to the needs of vulnerable, inaccessible communities through strengthened funding partnerships, while ensuring sustained innovation uptake learning within the broader humanitarian system.

VISION | To save and improve the lives of populations affected by conflict by reducing gaps in humanitarian assistance, while fostering systems change across the humanitarian sector.



A
PARTNERSHIP
OF



Ministry of Foreign Affairs of the
Netherlands

