

Vital Information Agency (V.I.A)

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Vital Information Agency (VIA) is an IT collaboration led by Pax Syriana. It is a specialized information service, bringing together local and international media, Syrian civil society, and INGOs to deliver life-saving, practical information to Syrian civilians through a low-bandwidth, geo-localized mobile application. The project combines local, grassroots expertise with cutting-edge technical innovation through a combination of local and international partnerships.

Part I: The Product

Information as a Basic Need

While the concept of humanitarian information has been embraced by the humanitarian aid sector, it is usually framed in the context of information sharing between aid workers and agencies, medical care providers, and other first responders. While this awareness has led to dramatic improvements in aid delivery and alert systems, we believe this is only a start; that the delivery of essential information in humanitarian contexts can have far greater impact potential that is currently being achieved.

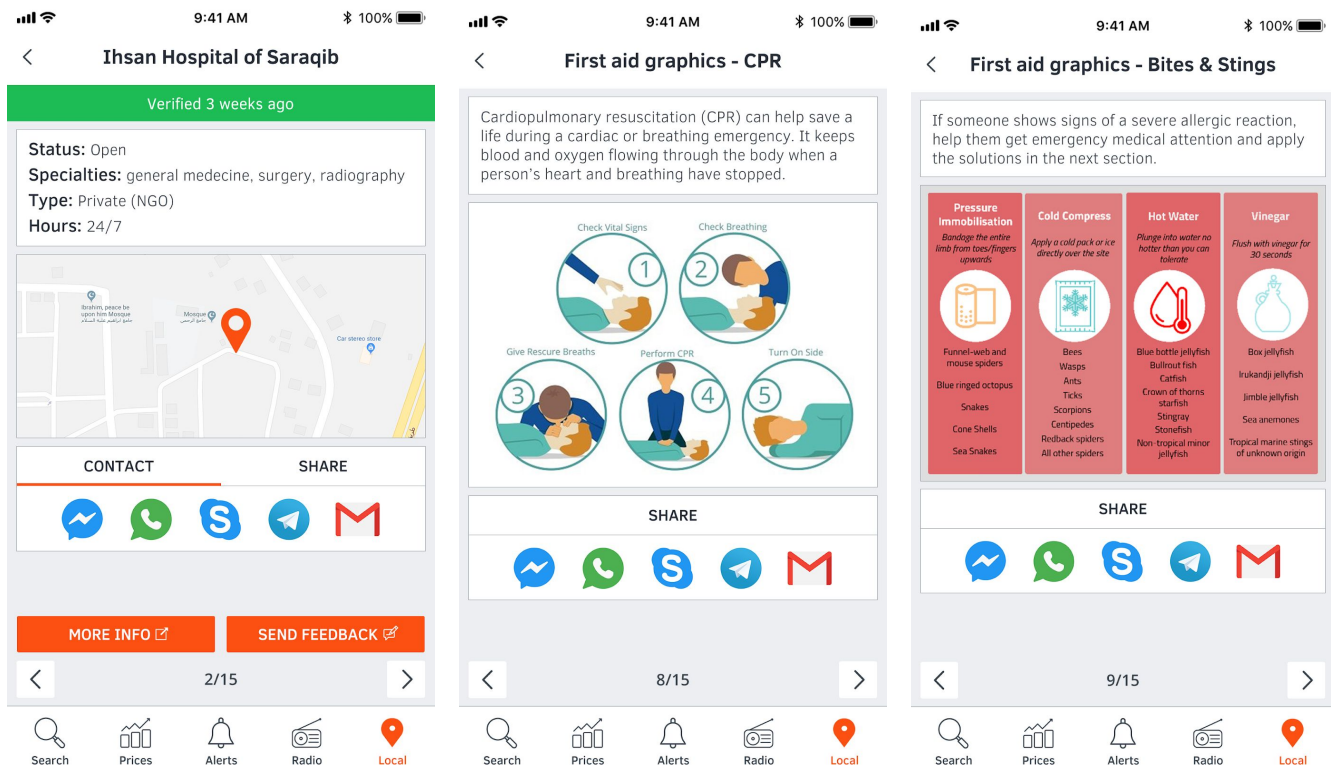
Our research among both displaced and non-displaced Syrians has shown that information has equal or possibly greater lifesaving value for civilians themselves, not just the organizations and individuals who serve them. Our conversations revealed a wide array of concrete, practical information that people look for on the internet but don't find consistently. This included some more obvious types of information, like aid distribution announcements or early airstrike warnings, but also some less expected subjects: job announcements, exchange rates, road closures, first aid, commodity prices, psychological health advice, etc.

Furthermore, for every type of information, at least one third of respondents who rated it as very important (between 8 and 10) reported that they do not always find the information they need. For health-related information, this rises to more than half, and even 60% for the status of hospitals. This thorough investigation led us to the conclusion that there is far more that can be done in the field of humanitarian information delivery to support civilians' day-to-day resilience and survival. VIA is a solution that will integrate information from the full range of sources: medical care providers, civil society, local Syrian media, and international organizations, to create a "one-stop-shop" for civilians looking for help.

An Integrated Solution

VIA will deliver geo-localized information to users from all relevant sources in an easy-to-use, discreet, low-bandwidth mobile application. Crucially, it will integrate updates from a vast array of partners, including local medical care providers, observatories, civil society organizations, local councils and other administrative bodies, humanitarian aid agencies, local and national news media, and international media organizations. As a project of the Syrian diaspora, VIA neither serves the international humanitarian community exclusively, nor neglects its importance, but helps aid and services reach more people, empowering beneficiaries to find what they need. Partner agencies can not only publicize their actions (aid distributions, vaccination campaigns, etc.) but provide real-time updates of available hospital beds and medications, and helpful directories of specialists and specialized equipment.

Simultaneously, crucial local partners can provide information that INGOs simply don't have the resources to collect: job listings, cooking and nutrition advice, local commodity prices, availability of fuel and key staple products. We work with local medical experts to provide general advice for home medical care and first aid, hygiene and illness prevention, psychological advice and information on the effects of trauma. This approach widens the definition of "humanitarian information" to include the numerous types of information that help civilians in war: not just to survive, but also to be resilient, proactive, and maintain basic dignity in the face of overwhelming hardship.



Mockups of VIA interface for the end user, showing sample pages with static data

Security at the Forefront

VIA has been conceived with security at the forefront of its design and development. From both a technical and information management perspective, the system is designed to sustain security threats, which are simply a fact of the Syrian context. The agency is coordinated using a rating system, meaning that each information sourcing partner will receive user ratings on their posts, based on helpfulness and accuracy. Sources who reliably post helpful, accurate information will receive permissions to post directly and be screened after posting, while those who lack this track record will need each post to be screened and verified by the VIA team before it appears on the app. This system protects both the content quality level as well as prevents the publishing of decoys or false information to VIA users.

From a technical perspective, the security framework for the application is one of the most high-priority work packages in the project, and will incorporate international best practices for data security. On the front end, information sourcing partners have a secure login so that only one trained individual can submit information, and only one mobile device per source partner (or organization) will have access. Information about the whereabouts of individuals, including geospatial data, will not be stored in our servers nor published on the app under any circumstances, and third parties will not have access to any of this information. The goal of VIA is to help Syrian civilians access healthcare and stay safe, and we are fully aware that technological solutions can be misused to put people in harm's way. Thus security is a primary focus of each step in the project design, development, and implementation, to avoid the lack of contextualization that can lead to misuse.

Serving the Hardest to Reach

VIA and the process of its development has been designed to ensure that the needs of the most vulnerable groups are not overlooked. For one, pilot communities for the beta version of the app will be locations with high concentrations of displaced people, including the most deprived, most hard-hit locations in Syria. As with any technical solution, we expect there will be user needs and preferences that we didn't think of initially, and displaced people often have more complex needs than locals who can rely on established social networks for help. From issues of design or geolocation functionality, to the task of contextualizing information in such a way that it is helpful to both the local and the newcomer, we apply a rigorous testing and user feedback process to ensure that the final product is truly useful to everyone.

Part of this prioritization of vulnerable groups requires ensuring that lots of expensive mobile data isn't needed in order to use the product. The application is developed to use only as much data as absolutely necessary, with a simple interface and only the essential functionalities. Furthermore, our partners Qaul.net have worked to integrate mesh networking capability into the application, which allows devices within physical proximity to synchronize information in the app without all devices needing an internet connection. They form a spontaneous network through which the most recently updated information is then synchronized to all nearby devices. This capability will bring VIA to a next level of impact, by delivering automatic information updates even to individuals who cannot afford continuous internet access.

Global long-term relevance

Once proven successful, VIA will seek partnership with major humanitarian and medical aid organizations and emergency response groups (Civil Defense, Rescue Teams). Ideally the scale-up phase would involve a major institution like OCHA or UNHCR that has coordinating responsibility across the entire country, which could become our focal point for INGOs and coordinate all international humanitarian contributors in all of Syria. Once VIA has proven effective at national-scale, it can be translated and localized for different contexts globally – not only different countries, but for different situations like disaster relief or rural development (the basic coding infrastructure remains the same). In addition, the information flows created will continue to be relevant in the rebuilding and development phase of Syrian society. The relationships between Syrian civil society, media, and local administration that are created through the project can translate to efficiency in other collaborations, and will support communities' basic functioning and resilience as they weather the political transitions ahead.

Part II: The Project

The project of making VIA a reality involves several sets of skills and tasks and that will be implemented by different project partners, including ASML/Syria, SMART News Agency, Pax Syria, and Qaul.net.

A. Set-up of the specialized information agency

Part A will rely on a trained team to gather and verify local and field information: the “vital information agency”.

The goal of this workpackage is to setup and operate the organization which manages sources, and which collects, analyses, and packages the information to be delivered by a mobile application. In particular, this organization is in charge of specifying the processes and workflows of its operations.

The project depends on the combined efforts of the contributors on their respective operations: research, information gathering, and dissemination. The efforts require extensive in-field access, expertise in humanitarian assistance, and a knowledge of how to reach vulnerable populations.

While we aim to ultimately deliver service information across Syria, we will pilot it with IDPs because they represent some of the most vulnerable populations, and because it directly leverages the work of humanitarian partners.

The pilot will run in several “prototypical” camps that have different challenges and contexts, ranging from large, permanent camps with numerous administrative actors, to small informal settlements with no clear leadership.

In addition to the information that we collect directly through the dedicated “service information agency”, we will partner with municipalities and humanitarian organizations that manage aid distribution and medical services in order to include announcements and practical information specific to IDPs.

Through this process we will establish publication and moderation processes. Publication guidelines will be prepared by the V.I.A editorial team, detailing the workflows, depending on the source of the information. For each type of information, data forms will be prepared. These forms will comprise the needed information and will provide optional spaces for contributors.

Finally, the editorial team will collect and update static and non-static data, in partnership with specialized partners (e.g. directories of hospitals, administrative points, standby pharmacies, guidelines for safety issues, medical primary care, etc.). Representatives from our partners will be trained to input information into the information flows each day, so it serves as a clearing house for all information relevant to displaced families and their host communities.

B. Development of VIA mobile application

The VIA concept has the potential to change the way basic services and humanitarian aid are delivered inside Syria. The agency will operate through a mobile application working directly with an internet connection or alternatively through a dedicated “mesh-network” that connects all mobile devices in an area, providing real-time, localized updates even to those who lack internet access.

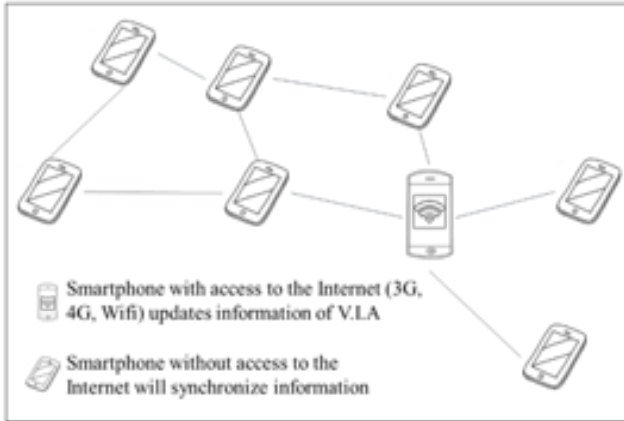
In order to have impact on a national scale, we need to first develop the technical solutions, implement them in pilot communities, and establish proof of concept. The project represents innovation at the nexus of humanitarian aid and international development, consistent with the “New Way of Working” proposed by the UN, which focuses on deliberate cooperation between sectors for better collective outcomes.

It will be ready for multiple parties to add information, including municipal and humanitarian partners based inside and outside of Syria. Flow of information will be ultimately moderated and edited in a publishable format by the specialized editorial team of V.I.A.

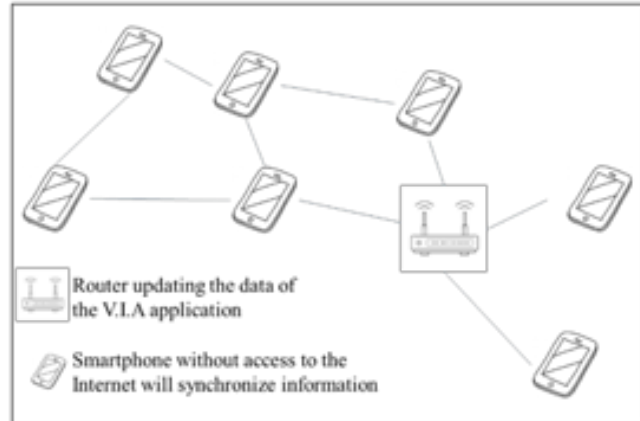
The proposed work plan involves a separate task set focused specifically on incorporating the most advanced security measures possible. From the beginning, best practices and extra security precautions will be observed, including isolating servers and data, anonymizing data and metadata, and encrypting and signing all communications.

The second set of required development tasks focuses on enabling the autonomous creation of a wireless mesh network between users who have downloaded the app. This will enable the app to synchronize its data between all users that are connected within the mesh-network. The first case presented below shows an example where only a limited number of users have access to the internet (for example through a 3G package), these users receiving updated information from V.I.A, all the connected users will synchronize the information freely.

Case 1: Limited number of users have access to internet



Case 2: None of the of users have access to internet



Graphic representation of possible mesh network configurations

Another example involves the installation, for example in a refugee camp, of a V.I.A-owned router, that will serve as a relay for all users within the camp to freely synchronize the information of V.I.A, without the need to access the internet themselves. This configuration may prove particularly relevant in extremely isolated camps or villages, where access to the internet by the population is almost nonexistent. In such a case, a router might be directly plugged to a VSAT by the V.I.A team to deliver updated information on the V.I.A application.

C. Achieving Sustainability

The project will achieve financial sustainability through two revenue streams: partner subscriptions from humanitarian actors and medical aid providers, and licensing of intellectual property to adapt the application to other contexts.

VIA was designed in close consultation with humanitarian agencies working in Syria, including OCHA, SAMS, UOSSM, People in Need, ICRC, and others. They expressed strong interest in the concept, and a willingness to adopt such a system, especially with their needs incorporated into the design. We incorporated their feedback - for example, adding a user feedback system to gather reactions to the information delivered, facilitating better monitoring & evaluation, particularly in regions where agencies struggle to maintain personnel.

The main paying clients of the service will therefore be humanitarian agencies, who will benefit from a direct channel of communication to deliver alerts and announcements, as well as receive feedback from some of their hardest-to-reach beneficiaries. Beyond a mere communication channel, SMART News Agency will bring a built-in audience of hundreds of thousands, which it has built by proving its independence and credibility to Syrians since 2011. Therefore VIA will be appealing to humanitarian actors by providing both a platform for communication, along with an existing audience who trust and rely on the service.

3-year sustainability plan	Year 1	Year 2	Year 3
Paid subscribers (partners)	-	20	50
Downloads	500,000	2 million	5 million
Monthly active users	300,000	1.2 million	3 million
Projected Revenue	0	\$200,000	\$500,000
Projected Profit	0	-\$50,000)	\$250,000

The second revenue stream will be viable at a later phase of the project, when it has proven its effectiveness in the Syrian context. The technology itself - that is the application with integrated mesh networking - can be licensed to other organizations and companies to create essential information systems for other complex humanitarian contexts. This could include other conflict zones or rapid response situations such as natural disasters. It could be localized for different languages and cultures, and accommodate a wide range of different partners and command structures. The intellectual property will be available for licensing by international institutions like OCHA or UNHCR, humanitarian agencies, or even cities or governments.

The final page of this document provides a general overview of an 18-month timeline for the Vital Information Agency (VIA) project, achieving an initial proof-of-concept based on a limited pilot population. It is divided flexibly into three activities: testing and refinement of technology, set-up of the information agency, and deployment and monitoring of the full system. Each phase on its own is necessary but not sufficient to produce a viable product; the full cycle is required before VIA could be scaled up to larger regions and contexts.

About the Project Leadership

Vital Information Agency (VIA) is overseen by Pax Syriana, an umbrella organization that includes SMART News Agency and ASML/Syria. Its Chair, Dr. Chamsy Sarkis, was from 2002 to 2013 a biotechnology researcher, set up several biotech firms and coordinated international research, and is founder and CEO of SMART News Agency. Mr. Jean-Jacques Py, CTO of Pax Syriana, former VP at Bank of America, is a senior software architect. Mr. Armand Hurault, director of ASML/Syria, has managed over 20 grassroots media development projects in Syria.

ASML/Syria is a French-Syrian NGO that develops media-based solutions to the social and humanitarian consequences of the Syrian war. Since 2011, we have worked with journalists, local media, administrative bodies, and civil society across Syria in order to support an independent press and freedom of information for citizens. Having implemented capacity-building projects with a wide range local media and established information channels for essential, life-saving information, ASML/Syria is a crucial partner for coordination of information sources for VIA.

SMART News Agency was founded in 2013, and is currently the most prominent independent news agency in Syria, with correspondents across the country delivering both Arabic and English content. SMART has been a crucial partner in media development and capacity building projects, supporting technical capacity, training journalists, and delivering essential information for civilians.

The Pax Syrjana Foundation is an umbrella organization that provides strategic direction and coordination of these three component organizations, helping them collaborate on mutually beneficial projects and support the larger aim of a vibrant, pluralistic, effective Syrian civil society.

Qaul.net is a Berlin-based group of programmers and technical experts who innovate open-source technologies for civil society. They have successfully implemented mesh networking technology for direct communication between devices in multiple contexts around the world.

Work Plan Overview:

18-Month Timeline for Development and Launch of Vital Information Agency (VIA)

Activity 1: Testing and refining technical solutions	Months 1-18
Sub-activities: <ul style="list-style-type: none">· 1a. Refinement of application and content management system based on field testing, including advanced features such as two-way communication, geographic filtering of content (months 1-18)· 1b. Enhancement and testing of mesh network solution (bespoke protocol based on Wi-Fi and other means) (months 1-6)· 1c. Integration and refinement of the mesh network (months 6-18)	
Activity 2: Set-up of agency; content-gathering and dissemination processes	Months 1-8
Sub-activities: <ul style="list-style-type: none">· 2a. Publication and moderation processes. Collection of static data (tips, directories) (months 1-4)· 2b. Establishment of partnerships with ~35 partners: camp administration, municipalities, local NGOs, hospitals (months 3-7)· 2c. Training partners to gather and edit relevant information for IDPs (months 4-8)	
Activity 3: Deployment and monitoring	Months 5-18
Sub-activities: <ul style="list-style-type: none">· 3a. Gradual deployment of VIA application, reaching ~20 camps and ~10 villages (months 5-18)· 3b. Polling on usage of the platform, gathering of user feedback (months 13-18)· 3c. Measurement of usage, study of VIA impact (months 13-18)	

