

Analyzed Data and Results

DIAL MNO Platforms
Expert Advisory Meeting
March 28, 2017



Facilitated By:

BrightFront Group



Problem Statement and Cause Overview

“It takes too much time and resource to launch an SMS, USSD, voice, or payments based development or humanitarian service comprehensively and at scale”

Problem Description	Where Does the Problem Happen, and How Often?	What is the Time Frame Involved?
<p style="text-align: center;">There Was General Agreement that the Problem Statement is Correct.</p> <ul style="list-style-type: none"> • Process improvement needed on both supply & demand sides • MNOs shouldn't always be at fault by default • Infrastructure investment should be separated from project set up • Unclear standards on acceptable timelines & services • Hard to negotiate with MNOs in advance of funding • Unclear ecosystem. Not everything can be “sustainable” or require a “business case.” • MNOs trying to hide limits of infrastructure capabilities 	<p style="text-align: center;">What Are the Causes of the Problem, Both Processes and Barriers? (Answers Overlapped, So Merging)</p> <p>Regulation (Top voted)</p> <ul style="list-style-type: none"> • Inconsistency of regulations • Heavily regulated • Bad or lack of regulations that support sector <p>Market Matching (Top voted)</p> <ul style="list-style-type: none"> • Different economic drivers for commercial partners vs. development sectors. • Social goals not central to commercial • Too much cost in the system to obtain service, requiring a “business case” for projects • Fragmented demand • MNOs asked to donate services; could be monetized • Differing KPIs • Aggregators don't offer services, as niche requests like reverse billing not reflected in overall market • Tough to ask aggregators to invest in scale & capacity when future business is vague promise. • Business model not well defined to work with dev sector <p>Shortcodes (Top voted)</p> <ul style="list-style-type: none"> • Shortcode acquisition requires a purpose, and can't be obtained in advance. <p>Telecom Capabilities & Infrastructure</p> <ul style="list-style-type: none"> • Limited infrastructure & bandwidth; opaque capacity • Local businesses lack technical, legal, biz talent • Lack of aggregator intermediaries in some countries • No capital to start or grow aggregators • No capital for infrastructure • Bad MNO management • Non standard request can add months to timeline 	<ul style="list-style-type: none"> • 5 minutes to infinity, depending on project • Voice services can be stalled 3-4 months depending on country, due to concerns about VOIP and long distance call termination regulations that never are articulated. • 6 months to launch a project versus 6 months to set up the project are different things • Appropriate time investment varies whether it is a short term project or a multi year project • Overall, time to set up can range from 6-18 months in many markets
<p style="text-align: center;">How Big is This Problem? – Agreed is Very Big Listing Below Instead Further Causes of Problem</p> <p>NGO Side Program Design, Capabilities</p> <ul style="list-style-type: none"> • Lacking technical capabilities within NGOs • Projects mistakenly bundle technical and content • Gap between expenditure & efforts • Lots of short term projects • Grant cycle timelines make business planning and negotiation difficult • Poor project planning; poor communication & coordination • Ad Hoc Handover process for project <p>Standardization</p> <ul style="list-style-type: none"> • No contractual standards • Service definitions & SLAs not standardized • Replicable, repeatable learning facilitates scale 		<p style="text-align: center;">Who Are the Stakeholders?</p> <ul style="list-style-type: none"> • Donors • Implementers • Local in-country commercial partners • Government Counterparts • Operators • Aggregators • End-Users • Local NGOs • International NGOs

Problem Statement and Cause Overview

Simplified Version

Problem Description and Size	What are the Systems Causes of the Problem, both Processes and Barriers?	What is the Time Frame Involved?
<p>It takes too much time and resource to launch an SMS, USSD, voice, or payments based development or humanitarian service comprehensively and at scale</p> <p>Problem affects majority of projects in sector</p> <hr/> <p>How Does Capacity Cause the Problem?</p> <p>NGO Side Program Design, Capabilities</p> <ul style="list-style-type: none"> • Lacking technical project management capabilities within NGOs • Gap between expenditure & efforts • Lots of short term projects <p>Telecom Capabilities & Infrastructure</p> <ul style="list-style-type: none"> • Limited infrastructure & bandwidth • Local lack of technical and legal expertise • No aggregators in some countries • No capital for business or telecom infrastructure 	<p>Regulation</p> <ul style="list-style-type: none"> • Inconsistency of regulations • Heavily regulated • Bad or lack of regulations that support sector <p>Standardization</p> <ul style="list-style-type: none"> • No contractual standards • Service definitions & SLAs not standardized • Fragmented one-off projects stymie replication <p>Market Matching</p> <ul style="list-style-type: none"> • Economic drivers for commercial versus development sectors • High cost for service set up, requires a “business case” for projects • Fragmented demand • Aggregators not economically incentivized to offer needed match of services, scale & capacity • Process improvement needed on both supply & demand sides 	<p>Who Are the Stakeholders?</p> <ul style="list-style-type: none"> • Donors • Implementers • Local in-country commercial partners • Government Counterparts • Operators • Aggregators • End-Users • Local NGOs • International NGOs

Solutions Overview 1

Category	Solutions	Descriptions
Increasing Service Deployment Efficiency	Fast Lane Contracts & Services TOP IDEA	Template contracts on business models. Signed off in advance by MNO group head office; GSMA; in country regulator. Speeding approval. Class of normal “safe services” that could be fast assigned. E.g., 2 way long numbers with caps on throughput.
	Development Sector Service Issuer TOP IDEA	Multistakeholder group, providing access to infrastructure to incentivize coordination. For example, pre-assigned shortcodes for development & humanitarian use. Delegated responsibility & limited quantity. Relaxed content regulation (Spam regs) and reverse billing set up.
	Burst Capacity	Ability to simply tune requests for MNO service burst capacity
Regulatory Environment Improvements	Best Practice Regulation	Drafting and promoting adoption of best practice regulation in many country markets
	Liability Shift	Shifting liability for regulation violations to aggregators rather than MNOs
Hardware & Software Interventions	Aggregator Kit in a Box TOP IDEA	Hardware & software bundle would immediately enable aggregation services that meet international standards, in terms of messaging volume capacity; responsible operations; good billing practices; good security; responsible protection of PII. Would be ready for integration with RapidPro, VOTO, Praekelt, and other services that pass the bar. Open-source toolkit also to include business set-up, business model canvas to help launch new providers into the marketplace, to meet international SLAs.
	Custom Hardware / Software	Work with equipment manufacturers to design for development and humanitarian project specifications.

Solutions Overview 2

Category	Solutions	Descriptions
Project Support	Project Planning Recipes	Share existing shorter working documents: checklist, contract boiler plates, work plan, etc, to assist others to launch their projects. Best practice patterns for getting pilots off the-ground, pilot stage to scale.
	Peer Wiki	Community database and wiki, organized country by country. Topics include known services, cost, shortest path
	Stakeholder Framework and Marketplace TOP IDEA	A framework that specifies who does what, where, when, and how in every type of project. Reduce redundancy, prevent competition and promote collaboration to solve problems together efficiently. An extension is a neutral directory/marketplace that lists certified actors, roles, capacities as well user reviews of their services.
Capital Investments	Investments in Service Capacity TOP IDEA	Upfront Capital Expense can be reduced by: <ol style="list-style-type: none"> 1) Cost-sharing through demand-forecasting 2) Pre-positioning in disaster prone regions 3) Amortization of investments in infrastructure and businesses – long-tail investment value 4) Support and Work with local aggregators or businesses that have proven business models and have successfully solved similar regulatory and technical problems.
Standardization	Standardization of service definitions TOP IDEA	Universal description for common services such as reverse billing, disbursement of credits, etc.
	Standardization of rules in content distribution	Legal Framework that separates content requirements with project requirements. Currently, frequently required to submit one year of content to authorities in advance.

Top Voted Solution

The IDEA: **Development Sector Service Issuer**

Consolidated Pre-assigned Resource Pool for Development and Humanitarian Projects

Who	Regulators, MNOs and Civil Society
What	Fixed pool of Short Codes, enabled with Reverse Billing, Fewer Restrictions, Liability, Risks and Service Requirements Waiver, MXP/Stand-by Network Gateway. Content approval waivers. Self-Regulating Body to decide on resource allocation.
Where	Global, Shock-vulnerable markets
When	Year 1: Regulatory Waiver Document, Getting Regulator Buy-in, Governance Framework for Resource Pool Allocation/MXP, Emergency Activation Protocols, Participation Requirements,
How Much	1 Million USD for pilot
Notes	Potential Roadblocks: Coordination, Regulatory Process, Technical Operation

Top Voted Solution

The IDEA: Fast Lane Contracts & Services

Who	DIAL, Donors, ITU, GSMA, Aggregators, Regulators, MNOs & Development Sector, Lawyers
What	Online repository of contract templates organized by service definition & country. Goal is for reaching maximum coverage, so start with SMS services, then add on other service classes. Downstream: class of normal “safe services” that could be fast assigned. E.g., 2 way long numbers with caps on throughput.
Where	Contact Templates posted online, possibly on DIAL website
When	Could start immediately by reviewing existing contracts and convening a working group of the constituents above and telecom law experts. Within 2 years, we could see significant results.
How much	1 Million USD for 3 countries and 1 class of service (SMS)
Notes	Potential Roadblocks: Country by Country is a linear process, this effort might not shorten MNO approval time for projects. Uninterested Regulators, Slow MNO on-boarding, Socializing this contract repository as resource in the development/humanitarian community.

Top Voted Solution

The IDEA: Standardized Service Definitions

Standardization of the service definition, so that customers know that to ask for and where to find the providers. Allows MNOs and Aggregators to be familiar with services requested, including standard APIs and standard contracts to go with the services.

Who	Program Managers, MNOs, Aggregators, Software Layer Provider
What	Survey Checklist to determine service needed 4-6 Service Packages that provide information on the following components: Channel (SMS, Voice, USSD), two way/outbound/inbound, short code/long code, alphanumeric, capacity/throughput, billing (normal, reverse, zero-rated), cross-network, SLA (delivery success rate & time), airtime distribution, geo-location queries & metadata.
Where	Global
When	Part 1: 1 day working group consortium to define what services exist today and what services are aspirational Part 2: Incubate and mainstream the existence of these services globally - region by region
How Much	Part 1: Beer and food + working group Part 2: TBD
Notes	Issues: Customers knowing what to ask for. Finding providers. MNO and Aggregator familiarity. One goal is less substitution for less impact.

Top Voted Solution

The IDEA: Investments in Service Capacity

Offset the upfront Capital Expense and defer infrastructure cost to maximize value; incentivize the creation and quality operations of local service providers/aggregators. Once they exist, it will be faster & cheaper for development sector to launch projects.

Who	Humanitarian & Development Sectors, Local service providers and Aggregators
What	<ol style="list-style-type: none"> 1. Clear aggregated demand 2. Healthy aggregator “service providers” ecosystem 3. Financial risk reduction – advance purchase commitments, cost-sharing & pool financing 4. Proactive deployment
Where	<p>Everywhere depending on:</p> <ol style="list-style-type: none"> 1) Market Maturity 2) Latent demand 3) Whether market would be more efficient than today 4) Humanitarian: Invest in crisis area in advance <p>Development: Sustained usage pattern that can pay for the expense</p>
When	<p>Year 1: Figuring the economic market – How to stimulate/aggregate demand, How to structure the demand side</p> <p>By Year 3: Market Support Intervention</p>
How Much	A lot of \$\$, but if the model can be figured out, the ROI is very high and can solve the “problem statement”
Notes	Potential Roadblock: Don’t spend more on research and financial modeling than what it takes to pilot and try to solve the problem outright

Top Voted Solution

The IDEA: **Stakeholder Framework and Marketplace**

Better communication channel and framework among multi-stakeholder actors in the form of Toolkits, Cross-Sector Process Templates & Case Studies

Who	Regional MNOs, Implementers, Tech Ecosystem, Regulators, Ministries
What	<p>A cross-sector process framework that specifies who does what, where, when, and how in every type of project.</p> <p>The goal is to reduce redundancy, prevent competition and promote collaboration to solve problems together in an efficient manner.</p> <p>Project Templates, Capacity Building, Demand/Need Projection Templates and Case Studies are among toolkits that would be useful. An extension is a neutral directory/marketplace that lists certified actors, roles, capacities as well user reviews of their services.</p>
Where	Regional (Start with Active Regions, then continue to Regions with less activities)
When	Start with 2-3 regions, first by convening on quarterly basis a group that launched related programs using similar tools.
How Much	TBD
Notes	Potential Roadblocks: Who owns this process; Scope Management

Top Voted Solution

The IDEA: Invest in Local Service Providers

Invest in Local Aggregators, and promote the rise of a healthy local ecosystem by organizing developer events in the immediate term, and possibly tech hubs long term.

Who	Local Aggregators, Development Sector Implementers
What	Demand Side: Development Sector can aggregate demand, prepay for future services in bulk (particularly in new region to assist with cash flow), and share information regards local aggregator's capabilities Supply Side: Assist local aggregators with MNO awareness, Regulatory & Partnership, Talent Development
Where	Aside from Nairobi & Lagos, the following countries are ripe for developer gatherings & tech hubs: Malawi, Zambia, Cote d'Ivoire & Senegal
When	Year 1: Organize initial developer gatherings and seed first batch of tech hubs. Develop roadmap of service demand & understand local context: regulatory, infrastructure & people Year 2: Organize developer gatherings or hubs in less-developed tech regions.
How Much	100K to 1 Million
Notes	Potential Roadblocks: 1) Regulatory issues 2) Competition for Tech Talent regionally 3) Solid Wall/Border: Each country is different than its neighbors, so cannot simply replicate the template of "success" wholesale across Africa, for example.

Top Voted Solution

The IDEA: **Aggregator in Box**

Approved, fast to deploy, proven, hardware & software bundle for SMS & USSD aggregation services

Who	National scale development sector implementors, Aggregators, In-country technical support teams
What	Beat market place messaging infrastructure fragmentation by establishing an open source reference implementation (hardware & software bundle) that immediately offers SMS and USSD aggregation services capable of supporting the volume, security, operational, monitoring, billing and API requirements for international development sector level SLAs. Integrations into RapidPro, Voto Mobile, Praekelt and similar services. Allows for layering long term business, training, support services on top to either strengthen existing providers or launch new ones.
Where	Regional, initially the African continent. Perhaps top and bottom 10 of Human Development Index in Africa.
When	1-3 months: get sector consensus on implementation, apis, protocols and integrations 3-6 months: develop, trial, iterate 6-9 months: reference implementation release with international endorsements 9-12 months: training programmes / possible certifications
How much	\$500K - 1.5M depending on sophistication of billing, operational infrastructure, monitoring and integrations.
Notes	Potential Roadblocks: It could both boost or disrupt infrastructure aggregation players, especially poorer performing ones. Which way that swings depends on their ability and willingness to adapt. Training will be crucial.

Solutions Scoring – Market Matching

Session Goals: Identify Viable, Multi-stakeholder Solutions, Assess Interest In Commitment, And Rate ROI Of Solutions. Voting On A Scale Of 1-10.

Solutions (Processes & Ideas)	Solution Description	Cost & Time Saved Potential	Level of Frustration Technical Provider	Level of Current Frustration to Client	Opportunity to Improve	Feasibility for Change	Level of Interest to Commit to Solution	Average Score
Standardization of Rules in Content Distribution	Legal Framework that separates content requirements with project requirements -requiring one year in advance of content	6.3	5.7	5	4.5	5.5	7	5.7
Standardization of Service Definitions TOP IDEA	Education for the MNOS: Universal description for common services such as reverse billing, disbursement of credits, etc	6.8	4.2	7.5	7.8	6.8	7.2	6.7
Recipes for Project Planning	Share existing shorter working documents: checklist, contract boiler plates, work plan, etc, to assist others to launch their projects	6.3	3.6	4.6	4.7	6	6	5.2
Better Communication Channel/ Framework with Multi-stakeholder Actors. TOP IDEA	A framework that specifies who does what, where, when, and how in every type of project. Reduce redundancy, prevent competition and promote collaboration to solve problems together efficiently. An extension is a neutral directory/marketplace that lists certified actors, roles, capacities as well user reviews of their services.	6.3	5.7	6.3	8	7.3	7	6.8
Project Blueprints	Best practice patterns for getting pilots off the-ground, pilot stage to scale, etc.	7	4.3	5	5.6	4	6.4	5.4
Offset the Upfront Capital Expense TOP IDEA	Upfront Capital Expense can be reduced by 1)Cost-sharing through demand-forecasting 2) Pre-positioning in disaster prone regions 3) Amortization – long-tail investment value	7	8.3	7.2	8.3	8.3	8.5	7.9
Invest in Local Aggregators TOP IDEA	Support and Work with local aggregators or businesses that have proven business models and have successfully solved similar regulatory and technical problems.	8.3	7.8	7.3	8.5	8.7	8.8	8.2
New Provider Start-up Toolkit	Invest in open-source toolkit (software stacks, business set-up, business model canvas) to help launch new providers into the marketplace, especially in new regions.	6.8	6.7	3.3	3.5	4.6	6.3	5.2

Solutions Scoring – Regulation Group

Session Goals: Identify Viable, Multi-stakeholder Solutions, Assess Interest In Commitment, and Rate ROI of Solutions. Voting on a Scale of 1-10.

Solutions (Processes And Ideas)	Solution Description	Cost & Time Saved Potential	Level of Current Frustration Technical Provider	Level of Current Frustration to Client	Opportunity to Improve	Feasibility for Change	Level of Interest to Commit to Solution	Average Score
Peer Wiki / How To	Community database and wiki, organized country by country. Topics include known services, cost, shortest path	6.4	7.9	6.4	5.7	5.7	7.9	6.7
Boilerplate, Fast Lane Contracts TOP IDEA	Template contracts on business models. Signed off in advance by MNO group head office; GSMA; in country regulator. Speeding approval.	10.0	10.0	7.5	8.9	4.6	8.9	8.3
Best Practice Regulation	Drafting and promoting adoption of best practice regulation in many country markets	7.1	8.6	6.4	9.3	6.1	7.1	7.4
Multistakeholder Aggregator	Multistakeholder group acting as an aggregator, providing access to infrastructure to incentivize coordination.	5.3	5.3	7.1	8.1	4.3	6.1	6.0
Shortcodes Pre-assigned TOP IDEA	Pre-assigned shortcodes for development & humanitarian use. Delegated responsibility & limited quantity. Relaxed content regulation (Spam regs) and reverse billing set up.	10.0	10.0	9.6	9.6	8.9	7.9	9.3
Fast Tracked Safe Services	Class of normal “safe services” that could be fast assigned. E.g., 2 way long numbers with caps on throughput.	6.8	7.1	6.8	7.1	4.6	5.0	6.3
Burst Capacity	Ability to simply tune requests for MNO service burst capacity	4.3	5.7	9.0	5.7	5.7	4.3	5.8
Liability Shift	Shifting liability for regulation violations to aggregators rather than MNOs	7.9	8.6	7.5	6.8	5.0	6.8	7.1
Custom Hardware / Software	Work with equipment manufacturers to design for development and humanitarian project specifications.	5.7	5.0	5.7	4.3	2.9	3.9	4.6

Photos from Expert Advisory Workshop

Regulation Group						
Solution	Description	Cost & Time Saved Potential	Level of Current Frustration to Tech Provider	Level of Current Frustration to Client	Opportunity for Improvement	Feasibility for Change
Peer Wiki/How To	Community database country by country to procure services. Weighted graph of flow services, cost, shortest path.					
Boilerplate, fast lane Contracts	Template contracts on business model kept head group sign off → speed approval. ASMA regulator.					
Best practice Regulation	Drafting & promoting best practice regulation in many markets.					
Multi stakeholder Aggregation	Telco, regulator, etc - multi-stakeholder group acting as an aggregator. Use access to infra as incentive to coordination.					
Shortcode pre-assigned	Pre-assigned shortcodes for dev & humanitarian use. Perhaps with relaxed content regulation (ex: SPAM). Class of normal, safe services that could be fast assigned. Ex: 2 way long numbers w/caps on throughput. Regulator approval.					
Burst capacity	Ability to simply tune requests for burst capacity of MNOs.					
Liability shift	Shifting liability for content reg. violations to aggregators.					

Solutions	Market Matching			
	Tech & Cost	Time & Tech	Level of Frustration to Tech Provider	Level of Frustration to Client
<ul style="list-style-type: none"> Standardization of roles (for example: not requiring and spec in return) Standardization of the process (Education for MNOs, Aggregation of demands across-country) Share existing & working templates (Shutterstock, etc) to assist others to bootstrap & launch projects 	Service Definition & cost allocation			
<ul style="list-style-type: none"> Better communication channel/framework w/ multi-stakeholder actors that promotes collaboration (1 leader & decision) Who does what, where & how to share roles 	Marketplace			

SOLUTIONS, ASSESS INTEREST IN COMMITMENT, AND RATE ROI OF SOLUTIONS

	SOLUTIONS, ASSESS INTEREST IN COMMITMENT, AND RATE ROI OF SOLUTIONS					
	Cost & Time Saved Potential	Level of Current Frustration to Technical Provider	Level of Current Frustration to Client	Opportunity for Improvement	Feasibility for Change	Level of Interest to Commit to Solution

PROBLEM STATEMENT

"It takes too much time and resource to launch an SMS, USSD, voice, or payments based development or humanitarian service comprehensively and at scale"

Problem Description

- MNOs unable to launch by default (1)
- Infrastructure investment cap from project
- Process improvement is needed in both

Where does the problem happen, and how often?

What is the time frame involved?

- 6 months to launch a project vs 6 months to launch the setup of a project means delaying!
- Start from one time project vs multiple projects (due to the current state)
- From 1 month to 1 year (depends on the market)
- Year-over-year can be scaled up to 1-2 months (with regulatory support)

Who are the stakeholders, and what roles do they play in the problem as well as potential solutions?

How long is this problem?

Handwritten notes and diagrams on sticky paper detailing the problem, stakeholders, and solutions.

Photos from Expert Advisory Workshop

