FUTURISTIC SBC: AI AND DIGITAL PLATFORMS AS SBC ACCELERATORS

Digital empowerment foundation

defindia.org

Community-Owned Digital SBC

AI and Digital Platforms for Access, Voice and Accountability

Digital is not simply a screen, platform or app. For SBC, digital must mean,

For SBC, the last mile is not the end point of delivery.

It is the starting point of design.

Why this conversation matters

Reach is rising.
Empowerment still has gaps.

Technology accelerates SBC only when it strengthens trust, feedback and accountability across the full cycle:

Listen - Understand - Engage - Respond - Learn - Correct

886M

➤ Active Internet Users

India, 2024; 8% YoY growth. Rural India: 488M users, 55% of internet population. (IBEF, 2025)

652M

➤ People Still Offline

At the start of 2025, 44.7% of the population did not use the internet. (DataReportal, 2025)

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➤ Active Internet in English

Hindi: 24%; Tamil: 6%; pointing to the need for multilingual digital content. (Internet Statistics in India, 2026)

Digital access and reach do not automatically translate into behaviour change.

- A message sent is not behaviour changed.
- A dashboard created is not a system strengthened.
- A chatbot deployed is not trust built.

SBC needs

- Meaningful access
- Repeated interaction
- Local language
- Trust
- Frontline counselling
- Social-norm understanding
- Community feedback
- Adaptive programme response
- Accountability

DEF lens: Digital Access as a Fundamental Right

Digital empowerment is not achieved when people are connected to platforms; it is achieved when communities can use digital tools to claim rights, access services, express voice, build livelihoods and hold systems accountable.

ACCESS - VOICE -RIGHTS

A rights-based digital system is judged by whether the last person can use it to be heard and supported.

Women-first inclusion evidence

691M

women: opportunities for contribution and innovation in the digital economy, if access, skills and design barriers are addressed.

59%

of women aged 15–49 have not completed 10 or more years of schooling, making voice-first, low-literacy design non-negotiable.

DEF's approach is not technology-first. It is community-first, women-first and meaningful access.

Meaningful Access: Principles and AI Accountability

Core principles

- Digital access is a fundamental right.
- Meaningful access means communities can empower themselves socio-economically using digital tools.
- Communities are knowledge holders and accountability actors, not beneficiaries.
- The most excluded user must define the design standard.
- Technology must be local, multilingual, low-cost, assisted and trusted.

SBC must reverse this.

Data and technology should strengthen community voice, local decision-making, grievance redress and public accountability.

AI accountability red line

- AI without accountability can become control.
- AI can become “absolute control” if data flows inward to powerful institutions and control flows outward to excluded communities.

The Four Questions for Today

Community-Owned Digital SBC

1. Tools & pathways

Which digital and AI tools can realistically extend SBC reach to the last mile?

2. Inclusion

How do we ensure SC/ST communities, low-literacy populations and persons with disabilities are reached, not excluded?

3. Sustainability

What ownership, financing and capacity arrangements will keep tools alive after external support ends?

4. AI governance

What data governance, bias-prevention and community accountability standards are non-negotiable before AI is scaled?

Question 1

Which digital and AI tools can accelerate SBC reach to the last mile?

Tools & pathways for access, voice, trust and accountable behaviour change

Voice-first access — **Frontline support** — **Community feedback** — **AI-assisted listening** — **Last-mile response**

The best technology is the one the last person can actually use.

The realistic tools for last-mile potential

The strongest tools are not necessarily the most advanced. They are the ones that work with low literacy, low bandwidth, shared phones, local languages and human mediation.

Design filter **Low literacy** **Low bandwidth** **Shared phones** **Local languages** **Human mediation**

TOOL CATEGORY	WHY IT MATTERS FOR SBC
Voice-first IVR, missed calls, audio messages	Works for low-literacy, shared-phone and low-bandwidth contexts.
Frontline worker job aids	Strengthens trusted counselling instead of replacing it.
WhatsApp/community groups with moderation	Familiar and scalable, but requires safeguards.
Social listening and rumour tracking	Helps systems adapt in real time.
AI translation, speech-to-text and text-to-speech	Useful for multilingual India if locally tested.
Community access centres / CIRCs	Converts digital access into assisted public infrastructure.

Four pathways for digital SBC acceleration

A tool is useful only when it solves a behaviour-change bottleneck.

PATHWAY	TOOLS THAT FIT THE LAST MILE	SBC OUTCOME
Reach	IVR • missed calls • WhatsApp • SMS • community radio • local video	Repeated access to information and reminders
Engagement	Voice platforms • community groups • feedback channels • assisted digital spaces	Dialogue, trust and participation
Frontline support	Mobile job aids • counselling cards • MentorApp • assessment tools	Better quality and consistency of counselling
Listening & adaptation	Social listening • dashboards • AI-assisted analysis • rumour tracking	Real-time correction and programme learning

Every tool must solve a behaviour-change bottleneck

A tool is not useful because it is advanced. It is useful when it helps the last person move from confusion to confidence, and the system move from delivery to response.

TOOL ➤ **SBC BOTTLENECK** ➤ **BEHAVIOUR CHANGE OUTCOME**

REACH	TRUST	CAPACITY	MONITORING	MISINFORMATION	FEEDBACK
Can people receive it?	Will people believe it?	Can workers use it?	Can systems see gaps?	Can rumours be corrected?	Can communities be heard?

Connect every digital and AI tool to one real bottleneck: reach, trust, capacity, monitoring, misinformation or feedback.

Mobile technologies for SBC works when digital tools strengthen trusted human systems

FRONTLINE REACH

820K+

ASHAs trained since 2006 to reach remote and underserved communities with preventive health services.

Why it matters: mobile job aids can strengthen the most trusted last-mile interface.

VOICE ENGAGEMENT

44,664 & 3,000+

Mobile Vaani IVRS outbound calls, plus moderated WhatsApp group members linked to maternal and child health information.

Why it matters: voice and moderated groups can turn information into repeated engagement.

FRONTLINE REACH

mHealth voice message

Regular listenership of automated voice calls showed positive impact on awareness, self-care and infant care practices.

Why it matters: repeated audio contact can support behaviour change when trust is built.

Mobile SBC succeeds when technology connects people to trusted voices, frontline counselling and responsive systems.

Problem Statement

Anjani's Digital Reality In Alwar District, Rajasthan

Anjani receives health messages on a shared family phone. Some are in English. Some arrive as text, though she prefers voice clips. Poonam, the village ASHA worker, is trusted but overburdened. Then a WhatsApp forward says: "immunisation harms children." Nobody knows which message to trust.

The programme has reached Anjani on paper, but Anjani has not gained trust about digital health information.

What breaks down?

01 Language

Message is not in a familiar language.

02 Format

Text excludes a voice-first user.

03 Trust

Rumour moves faster than local Guidance.

04 Feedback

Delivery is counted; doubt is invisible.

A trusted pathway from doubt to decision

The solution is not more broadcasting; it is community-owned decision support.

Anjani should be able to listen in her language, verify the rumour, ask a trusted person, and receive a response that helps her decide.

LISTEN	TRANSLATE	VERIFY	COUNSEL	RESPOND	CORRECT
Voice-first, low-bandwidth access	Hindi and local dialect support	Rumour checks through trusted channels	Poonam supported with simple job aids	Human call-back and assisted access	Feedback changes content and delivery

Anjani does not need another message. She needs a trusted pathway from doubt to decision.

Solution recommendations

Design the system around access, voice, trust and accountability.

01 Voice-first local access

Use Hindi and local Rajasthani dialect audio through IVR, missed calls and short voice clips.

02 Trusted rumour verification

Create moderated WhatsApp or voice channels where rumours are checked through verified local guidance.

03 Support Poonam with AI

Provide local-language FAQs, counselling prompts, rumour-response scripts and voice-to-text summaries

04 Assisted community response

Enable call-back through ASHA, counsellor, SoochnaPreneur or community centre.

05 Women-led safe spaces

Use SHGs, CIRCs and women digital leaders so questions can be asked without fear.

06 Feedback-to-response loop

Track doubts, rumours corrected, counselling provided and programme corrections made.

For DEF, technology succeeds only when the last person is not just reached, but heard, supported and empowered.

What Mobile SBC Has Already Taught Us

DIGITAL WORKS WHEN IT STRENGTHENS HUMAN SYSTEMS, NOT WHEN IT BYPASSES THEM.

Mobile SBC pathway	What it showed	Lesson for AI-enabled SBC
Voice-based information	mMitra showed that audio messages can reach semi-literate and low-literacy women with maternal and child health information.	AI should strengthen voice-first, local-language communication
Community voice platforms	Mobile Vaani and CGNet Swara showed that communities can speak, report, question and participate through their own voice.	AI should help systems listen to communities, not only send messages to them.
Frontline worker support	Mobile Kunji, Mobile Academy, mSakhi, CommCare and ReMiND showed that digital job aids can improve counselling, training, registration and referral.	AI should support frontline workers with translation, summaries, prompts and FAQs.
Monitoring and accountability	E-Mamta and Mid-Day Meal IVRS showed that simple reporting systems can improve follow-up and programme visibility.	AI should help detect gaps, delays, rumours and underserved geographies.

AI should build on what already works at the last mile

The goal is not replacement. It is stronger voice, faster listening, better frontline support and more accountable systems.

What worked in mobile SBC	Builds on AI adds	What AI can now add
Voice calls and IVR		Speech-to-text, text-to-speech, dialect testing
Community media platforms		Social listening, rumour clustering, community feedback summaries
Frontline worker support		Local-language FAQs, counselling prompts, case summaries
Training programmes		Scenario-based training, refresher learning, adaptive support
Programme monitoring		Pattern recognition, dashboard summaries, identification of gaps

Future direction: make mobile, frontline and community systems more responsive, inclusive and accountable through AI.

AI should first help systems listen better

AI can support SBC when it strengthens access, listening, frontline support and programme learning.

Listen ➤ **Translate** ➤ **Summarise** ➤ **Adapt** ➤ **Support**

Language bridge

- Local-language translation
- Speech-to-text
- Text-to-speech

Community listening

- Summarising field feedback
- Rumour clustering
- Social listening

Frontline support

- Content adaptation
- Frontline worker FAQs

Programme learning

- Programme dashboards
- Pattern recognition
- Identifying underserved geographies

The first job of AI in SBC should not be persuasion.
It should be listening, translation, summarisation, adaptation and support.

Question 2

How do we design tools so SC/ST communities, low-literacy populations and PwDs are actively reached, not excluded?

Digital exclusion is social exclusion in a new form. Inclusive SBC must therefore be designed not for the average connected user, but for marginalized and underserved communities who need accessible, assisted, local-language, voice-first and accountable pathways.

India is not One User

Digital SBC must focus for many realities at once — low literacy, shared phones, gendered access, caste exclusion, disability barriers, linguistic diversity and uneven trust.

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Languages

270 mother tongues with 10,000+ speakers (Census 2011)

536M+

Non-English internet Users

Projected by 2025 (KPMG-Google)

24.7%

Computer Literacy

18.1% in rural areas (NSS)

Many Indians Inside one digital system

Caste-based - Multilingual - Multi-religious -
Layered by Social Strata - Gendered Access -
Geography & Income Gaps -
Unequal Digital Autonomy -
PwDs, Migrants & Tribal Communities

> **An AI tool that works only for literate, smartphone-owning, dominant-language users is not an SBC accelerator. It is an exclusion accelerator.**

> **A digital SBC tool designed for the "average user" will likely serve the already connected. SBC must be designed for the least connected first.**

Inclusion-by-Design

Evidence of exclusion must translate into design requirements, not into afterthoughts.

Gender Digital Divide

- 33% women ever used internet vs 57% men (NFHS 2019–21)
- Rural men twice as likely as women to use internet: 49% vs 25%
- Only 19.8% girls reported owning a smartphone vs 43.7% boys (ASER 2022)
- Women are ~58% of shared-device users in rural India

Caste-based Digital Divide

- Broadband access: General 84.1%, SC 69.1%, ST 64.8%
- Lowest income decile: 71.6% households lack broadband
- SC/ST individuals with computer at home: ~6% vs 20% General
- ST communities face structural barriers despite low data costs

Persons with Disabilities

- Only 36.61% of PwDs regularly use digital services (DEF study 2024)
- 26.8M people live with disability; many platforms remain inaccessible
- Accessibility must be built from design and testing
- Human call-back and disability group testing are essentiallow data costs

Design for the Least Connected First

Voice-first ➤ Phygital, Not App-only ➤ Community-space Access ➤ Local-language & Dialect-ready ➤ Offline-online Hybrid ➤ Trusted Intermediaries ➤ Low-bandwidth ➤ Shared-device Usable ➤ Community Validated

What Inclusion Looks like in Practice

SC/ST and tribal communities

Local intermediaries, dialect content, community validation, grievance channels, tribal/community institutions involved in review.

Low-literacy users

Voice, audio, video, pictorial formats, IVR, assisted access, simple prompts, no text-heavy design.

Women and adolescent girls

Doorstep access, women digital leaders, safe use spaces, shared-phone realities, privacy-aware design.

Migrants

Portable access, multilingual content, helpline integration and service navigation.

Persons with disabilities

Screen-reader compatibility, captions, voice navigation, audio alternatives, simple interface, human call-back, disability group testing.

Digitally excluded households

CIRCs, Panchayats, SHGs, youth volunteers and assisted digital service points.

SC/ST inclusion needs local ownership and social accountability, not just translated content.

Accessibility for PwDs must be built from design and testing, not added at dissemination.

Community Infrastructure for Sustainable Digital SBC

Women Leadership + Community Information Resource Centers (CIRCs) + Local Institutions.

Non-intrusive approaches for Digital SBCs

Informal and non-intrusive approaches to introducing Digital-only mediums, without imposing rigid social norms, tend to gain greater acceptance within communities compared to more structured and prescriptive methods.

- Women Digital Leaders
- SoochnaPreneurs
- ASHAs, AWWs, ANMs, teachers
- Persons with Disabilities
- Community Information Resource Centres
- Youth Volunteers
- Poshan Preraks
- SHGs and Panchayats
- Tribal Institutions
- Rural Fact-checkers

DEF's women-led digital work shows that digital becomes local when women lead. Community centres and trusted intermediaries turn access into actual use.

Question 3

What ownership, financing and capacity arrangements will ensure tools are sustained from within?

Designing sustainable digital Social and Behavior Change (SBC) tools from within the local institutional architecture.

The Project Trap

Digital Tools Collapse when they are:

- Digital-only Design
- Funded as short-term projects
- Procured as software only (no systems)
- Designed without government ownership
- Operated without local capacity
- Built without maintenance budgets
- Disconnected from frontline workers

Sustainability is not a post-pilot question. It must be designed from day one based on hyperlocal need assessment

Minimum Viable Governance

Before scaling any digital SBC tool, ensure these seven institutional foundations

Ownership

One clear Govt. Owner & One Tech Maint. Owner

Feedback

One community channel & One content validation process

Escalation

One grievance pathway for accountability

Audits

One audit process for privacy, bias, & inclusion

Without this, digital SBC remains a pilot, not a systemic transformation.

Ownership & Capacity Matrix

Function	Ownership Arrangement	Key Capacity / Finance
Behavioural Content	Line Dept + SBC Experts + Communities	Dedicated Public Budget Line
Platform Ops	Govt Digital Unit / Mission Unit	Technical Maintenance Owner
Local Adaptation	District Teams, CSOs, CIRCs	Handholding Support (CSO)
Frontline Use	ASHAs, AWWs, teachers, Volunteers	Review system integration
Accountability	Community Forums, Social Audits	Grievance escalation mechanism

The government must own the system, communities must validate it, CSOs must handhold it, and institutions must improve it.

Poshan Workflow Model

Scale After Listening, Not Before

Example of a practical digital SBC workflow grounded in community validation and iterative logic.

PHASE 1: PREP

Select Poshan Preraks & Conduct ToT with Assessment.

PHASE 2: PILOT

Contextualize by location & Train on MentorApp.

PHASE 3: FEEDBACK

Mobilize communities, document via mobile, collect feedback.

PHASE 4: CORRECT

Correct ToTs, MentorApp, and core processes.

PHASE 5: DEPLOY

Full deployment and impact tracking

Grounded Method: Do not scale before pilot, feedback, correction, and community validation. Integrated Review Systems are critical for long-term health metrics.

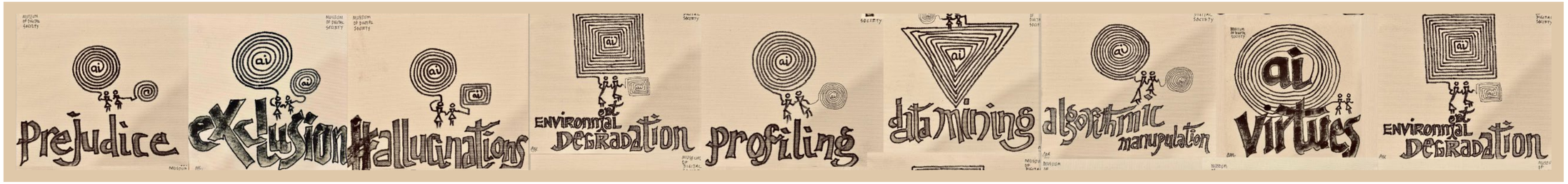
Question 4

What data governance, bias-prevention and community accountability standards are non-negotiable before AI is scaled?

The Virtues of AI

Use Confidently	Use Carefully	Do Not Use
• Translation support	• Risk segmentation	• Automated denial of entitlements
• Personalized nudges	• Frontline decision support	• Health advice without human review
• Speech-to-text / text-to-speech	• Behavioural targeting	• Profiling communities w/o consent
• Summarising feedback	• Predictive vulnerability mapping	• Surveillance / Trust erosion
• Dashboard summaries	• Training simulations	• Replacing community dialogue

AI assists human systems, but must not remove human judgement, consent, appeal or accountability



Red Lines Before Scale

Institutional Safeguards for AI-powered SBC Tools:

- **Bias testing:** Across caste, tribe, gender, language, and geography.
- **Community consent:** Explicit awareness and opt-in mechanisms.
- **Transparency:** Communities must know when AI is decision-making.
- **Human appeal:** Redress for automated decisions or exclusions.
- **Human oversight:** Mandatory review for high-risk applications.
- **Local accuracy:** Testing in vernacular contexts
- **Explainability:** Decisions simplified in local languages.
- **Data Minimization:** Privacy protection and open standards.

References: ScienceDirect (2025) study on algorithmic exclusion in India; ISB on Human Oversight.

AI Risks & Misinformation

India ranks highest for misinformation risk globally. AI amplifies deepfakes and fake audio/video, creating trust erosion.

Community Safeguards

- Reverse image search & Fact-checking
- Deepfake detection & Trusted sources
- Rural fact-checkers & Critical literacy

WhatsApp accounts for 64% of misinformation spread in India (MeitY 2023).

Inclusive Digital SBC Pathways

1. Extending Reach

Voice-first, WhatsApp, Community Radio, social listening, and assisted access hubs.

2. Avoiding Exclusion

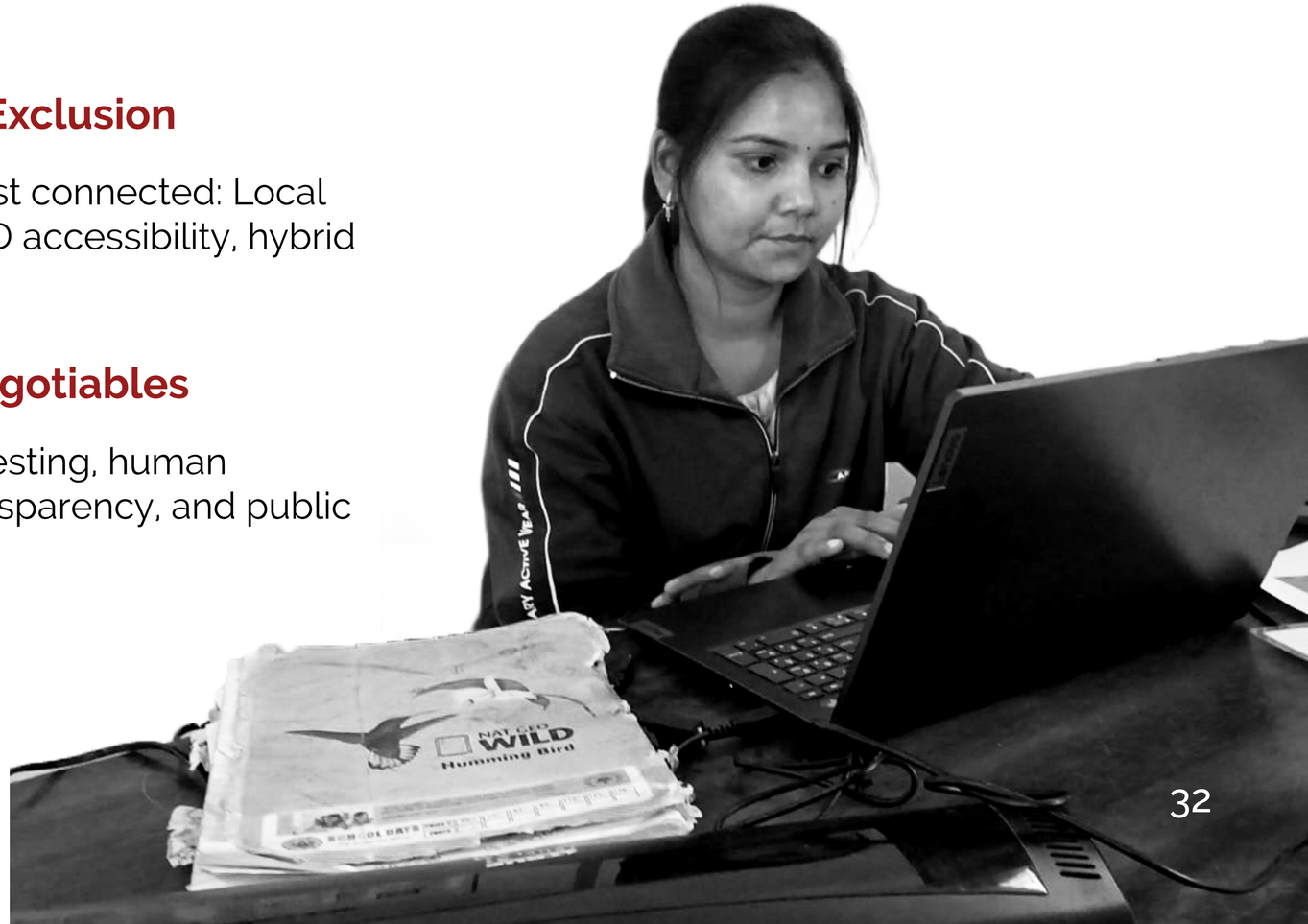
Design for least connected: Local language, PwD accessibility, hybrid models.

3. Sustaining Tools

Govt ownership, dedicated finance, frontline capacity, and CSO handholding.

4. AI Non-negotiables

Privacy, bias testing, human oversight, transparency, and public accountability.



DEF Proposition

Technology roots in trust. AI cannot replace dialogue or community ownership.

The future of SBC is not an app, but a community-owned ecosystem where women leaders and digitally empowered communities use technology to verify, respond, and hold systems accountable.

Acceleration through inclusion, not just advanced technology.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