

Custom Case Management Information System

Frappe/ERPNext Solution for Humanitarian Field Operations

Role: Information Systems Designer, Developer & Implementation Lead

Platform: Frappe / ERPNext

Environment: Local Server Deployment

Operational Scale: 10,409 child records and approximately 40 case managers

Project Overview

A humanitarian health organization needed a practical and reliable system for managing complex child and family cases.

Case information had previously been distributed across KoBoToolbox, Excel files, and a legacy application called Al-Yaseer. The previous environment was slow, difficult to use, and made information retrieval and reporting unnecessarily complicated.

I designed, customized, deployed, and operated a centralized case management information system using Frappe/ERPNext.

The objective was to translate the organization's actual case-management workflow into a usable information system supporting case managers, supervisors, project management, and support staff.

The Operational Challenge

- Case information was fragmented across multiple tools.
- Staff had to move between systems to understand a complete case.
- The legacy application was slow and difficult to navigate.
- Documents and supporting files were difficult to organize consistently.

- Reporting required repeated manual work.
- Existing tools did not fully represent the real case-management workflow.
- Recurring data-entry problems affected reporting reliability.

The Implemented Solution

The customized system included:

- Centralized child case registration.
 - Detailed child and household profiles.
 - Family-member information.
 - Disability and protection information.
 - Multi-domain assessments.
 - Case plans, objectives, and interventions.
 - Visits, referrals, services, and follow-up activities.
 - Images, PDF documents, and attachments.
 - Validation rules and duplicate-record alerts.
 - Role-based permissions.
 - Searchable reports and dashboards.
 - Case assignments and activity history.
-

[IMAGE 1 — Centralized Child Registry]

[illegible]

Caption:

A centralized registry allows authorized users to search, filter, classify, and follow child case records from one operational interface.

[IMAGE 2 — Integrated Case Profile]

CASH > CASE1 > ca63f8a304

Search or type a command (Ctrl + G)

Help

Mom

Assigned To

Attachments
Attach File

Shared With

Tags
Add a tag ...

0 FOLLOW

You edited this - 1 month ago
lofi anajar created this - 2 years ago

More Saved

Details

معلومات الأسرة

معلومات أخرى

الهوية

الاحالات

المحولات

التقييم

الحالة

رقم العائلة *

[REDACTED]

date of registration

Africa/African

Checked

Supervisor audited

Manager audited

نوع الحالة *

أمر جديد

Africa/African

Date of Checked

Checked

وتفني المثلث

وتفني الأب

وتفني الأم

بجاية لمعالجة غير نارية

نتيجة التحقق

للتسليم

طرح التحقق

البريد الإلكتروني

الجنس

تاريخ الميلاد

العنوان

مكان الإقامة

اسم المستلم 1

Director of the first recipient

عنوان المستلم الأول

مسلة القضية

Births of the first recipient

معايير المستلم الأول

الرقم الوطني 1

حوالي المستلم 1

اسم مستخدم الزميلة

العميلة 2

الجنسية

الجنس

النسبة

ملاحظات مدير الحالة

ملاحظات الموظف

ملاحظات المدير

auditId *

[REDACTED]

Audit date

UnicefCode

البلد

[REDACTED]

إداري

Administrator

Checked By Supervisor

Checked By Manager

اسم الطفل

[REDACTED]

صورة الطفل

Attach

ملف الطفل

Attach

Nationality

[REDACTED]

رقم بطاقة الهوية

[REDACTED]

الكودات الدولية

[REDACTED]

نوع الوثيقة

[REDACTED]

نوع الإقامة

[REDACTED]

الوضع القانوني

[REDACTED]

اسم المستلم 2

Relationship second?

Relationship second recipient to the first

[REDACTED]

Date of birth of the second recipients

[REDACTED]

Relation

[REDACTED]

مسلة غرابه المستلم الثاني بالاول

[REDACTED]

معايير المستلم الثاني

[REDACTED]

الرقم الوطني 2

[REDACTED]

حوالي المستلم 2

[REDACTED]

الجنسية/القومية

[REDACTED]

الجنس

[REDACTED]

المنطقة

[REDACTED]

Add a comment

Ctrl+Enter to add comment

Comment

Activity

Communication

New Email

New Event

lofi anajar created this 2 years ago

Hello

Error

lofi anajar created this 2 years ago • You edited this 1 month ago

Caption:

Each case profile connects registration data, household information, disability and protection details, assessments, visits, documentation, and follow-up activities.

[IMAGE 3 — Case Plan and Interventions]

CASH > CASES1 > 8553

Search or type a command (Ctrl + G)

Help

AA

• ضمن الشروط

Save

Details

معلومات الأسرة

معلومات أخرى

الحماية

الاحالات

الزيارات

الحوالات

الخطة

التقييم

خطة الحالة

☐	No.	الهدف	الإجراء المطلوب	مقدم الخدمة	بداية تنفيذ الخطة	المدة الزمنية	
☐	1	تحسين الصحة الجسدية	مراجعة طبيب عصبية		03-12-2023	غير محدد	
☐	2	تحسين القدرة الحركية	جلسات علاج فيزيائي		01-01-2024	غير محدد	

Add Row

الاحتياجات المرصودة

☐	No.	الاحتياج	الملاحظات	
☐	1	متابعة طبية		
☐	2	علاج فيزيائي		
☐	3	حفاضات		

Add Row

Add a comment

Ctrl+Enter to add comment

Comment

Assigned To

+

Attachments

Attach File

+

+

Shared With

+

Tags

Add a tag ...

0 0 FOLLOW

You created this - 2 years ago

Activity

Communication

All

New Email

New Event

Caption:

Case managers can define objectives, required interventions, service providers, expected completion dates, and progress levels within the case record.

From Operational Workflow to a Working Information System

Implementation Approach

The implementation started from the organization's existing forms, terminology, and working practices.

Rather than introducing an entirely unfamiliar structure, I preserved concepts users already understood and gradually converted them into structured workflows, forms, permissions, validation rules, and reports.

The system was improved iteratively based on:

- Recurring data-entry errors.
- User feedback.
- Reporting requirements.
- Workflow bottlenecks.
- Data-quality issues.
- New operational needs discovered during actual use.

My Role

I led the technical and operational lifecycle of the solution, including:

- Workflow discovery and requirements analysis.
- Data-model and form design.
- Frappe/ERPNext customization.

- Validation-rule implementation.
- User roles and permission configuration.
- Local server deployment.
- Network and access troubleshooting.
- User training and operational support.
- Maintenance and issue resolution.
- Periodic backups and archiving.
- Report and dashboard development.
- Continuous improvement.

Because of connectivity limitations, the system was deployed locally. Network and IP-conflict issues were addressed using a fixed server IP and organized device identifiers.

[IMAGE 4 — Data Quality Validation]

The screenshot shows a Frappe CRM report titled "Report: CASES1". The report is displayed in a table format with the following columns: ID, رقم المستفيد (Beneficiary Number), المدينة/القرية (City/Village), المنطقة (Region), and الناحية (District). The table contains 10 rows of data. On the right side, there are two error messages: "الرقم الوطني للمستلم الثاني مكرر في استمارات الأطفال" (The national number of the second recipient is repeated in children's forms) and "الرقم الوطني للمستلم الأول مكرر في استمارات الأطفال" (The national number of the first recipient is repeated in children's forms). A green "Saved" message is also visible.

Caption:

Reports and validation rules help users identify duplicate records, review inconsistencies, and improve the reliability of operational data.

[IMAGE 5 — Role-Based Permissions]

Search or type a command (Ctrl + R)

Help

Role Permissions Manager

Set User Permissions

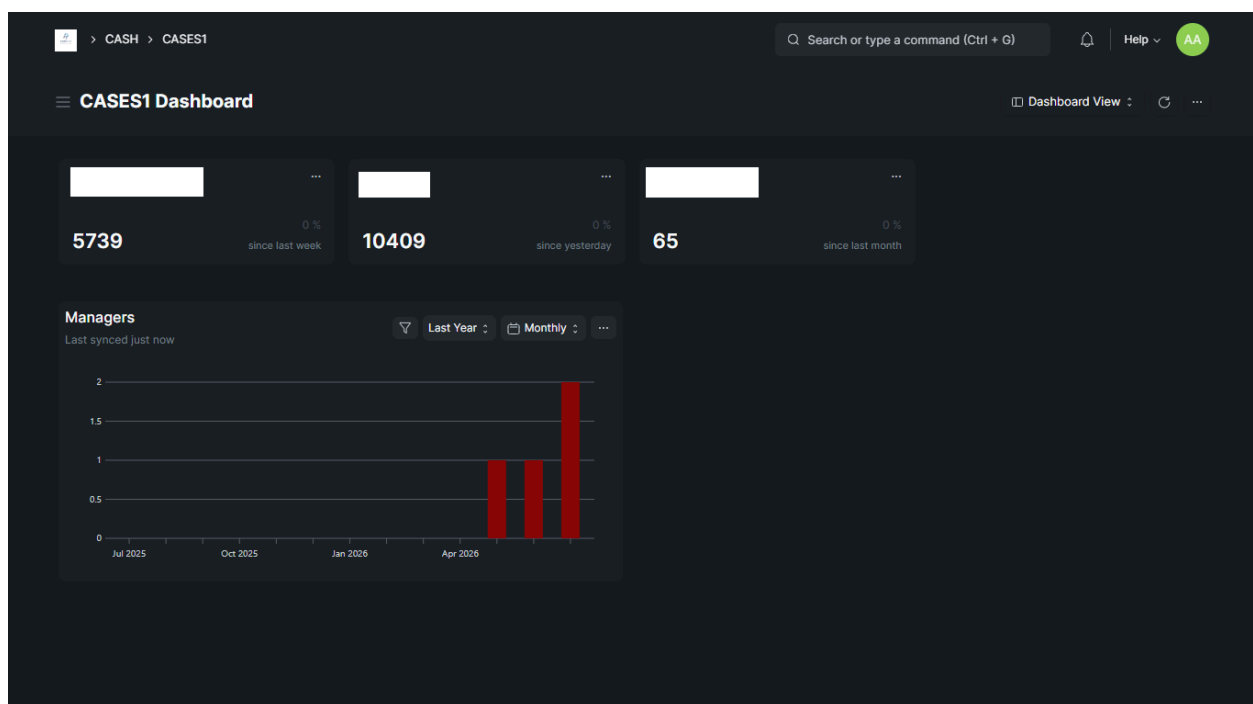
Add A New Role

Document Type	Role	Level	Permissions
CASEB1	مدير حالة	0	Select Create Email Export Read Delete Report Set User Permissions Write Print Import Share
	Only If Creator		
CASEB1	مدير حالة	1	Read Write
CASEB1	مدير حالة	2	Read Write
The class	مدير حالة	0	Select Create Email Export Read Delete Report Set User Permissions Write Print Import Share
	Only If Creator		
sorting	مدير حالة	0	Select Create Email Export Read Delete Report Set User Permissions Write Print Import Share
	Only If Creator		
Type of Disability	مدير حالة	0	Select Create Email Export Read Delete Report Set User Permissions Write Print Import Share
	Only If Creator		
Service1	مدير حالة	0	Select Create Email Export Read Delete Report Set User Permissions Write Print Import Share
	Only If Creator		
Service1	مدير حالة	1	Read Write
service_type	مدير حالة	0	Select Create Email Export Read Delete Report Set User Permissions Write Print Import Share
	Only If Creator		
KEY PEOPLE1	مدير حالة	0	Select Create Email Export Read Delete Report Set User Permissions Write Print Import Share
	Only If Creator		
KEY PEOPLE1	مدير حالة	1	Read Write
customerManager	مدير حالة	0	Select Create Email Export Read Delete Report Set User Permissions Write Print Import Share
	Only If Creator		
Verification result	مدير حالة	0	Select Create Read Delete Write Print
	Only If Creator		

Caption:

Access permissions are configured according to user roles and document types, helping restrict sensitive functions and information to authorized staff.

[IMAGE 6 — Operational Dashboard]



Caption:

Management dashboards convert operational records into visible indicators and reporting views that support monitoring and decision-making.

Indicator clarification:

- 10,409 refers to child records.
- 65 refers to success stories.
- Neither figure represents a percentage improvement.

Operational Outcomes

The implementation enabled the organization to:

- Access case information through one system.
- Connect child, household, assessment, service, and follow-up data.
- Organize supporting images and documents.
- Track case plans, interventions, visits, and referrals.
- Apply validation and duplicate checks.
- Manage access according to staff roles.
- Generate filtered and aggregated reports.
- Provide management with operational dashboards.
- Reduce dependence on scattered files and disconnected applications.

Project Scale

- 10,409 child records managed within the system.
- Approximately 40 case managers involved in operational case work.
- Additional supervisory, project-management, and support roles used the system.
- Local deployment designed for a connectivity-constrained environment.

What This Project Demonstrates

Understanding how an organization actually works, translating complex operational processes into a practical system, leading deployment and user adoption, and continuously improving the solution based on real operational needs.

Technical Environment

Frappe Framework · ERPNext · Python · MariaDB · Local Server Deployment · Role-Based Access Control · Custom Forms · Validation Rules · Reports · Dashboards

Reusable Professional Claim

Designed, customized, deployed, and operated a Frappe/ERPNext-based case management information system that centralized 10,409 child records and supported approximately 40 case managers, covering workflow analysis, data-model design, local deployment, permissions, validation, user training, maintenance, backups, and operational reporting.