

Intelligent Study Build

Oracle Clinical One API integration & EvidentIQ ePRO API integration

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The Objectives
of our demonstration
covering **design, build**
and **execute**

1

Streamline study
design

2

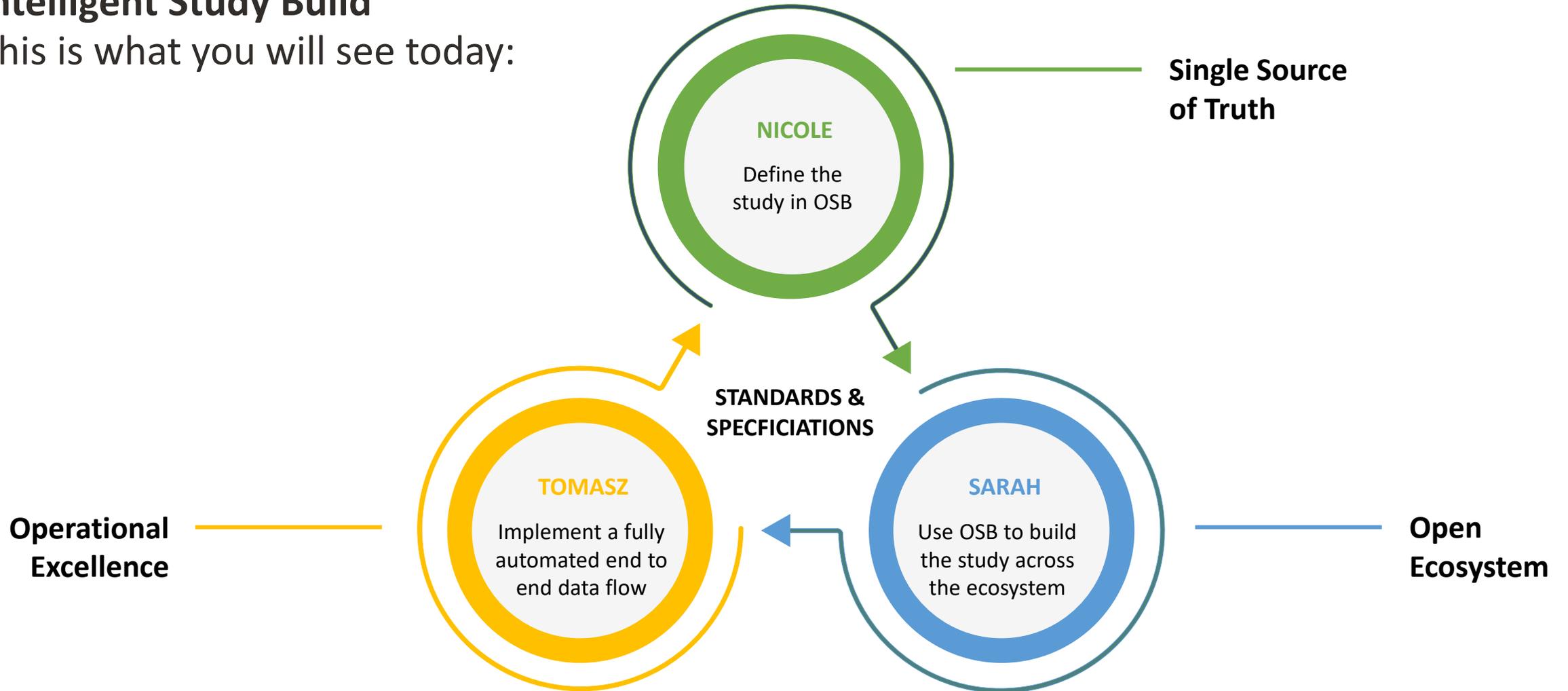
Identify
efficiency gains,
lowering
operational costs

3

Reduce time to
study start

Intelligent Study Build

This is what you will see today:

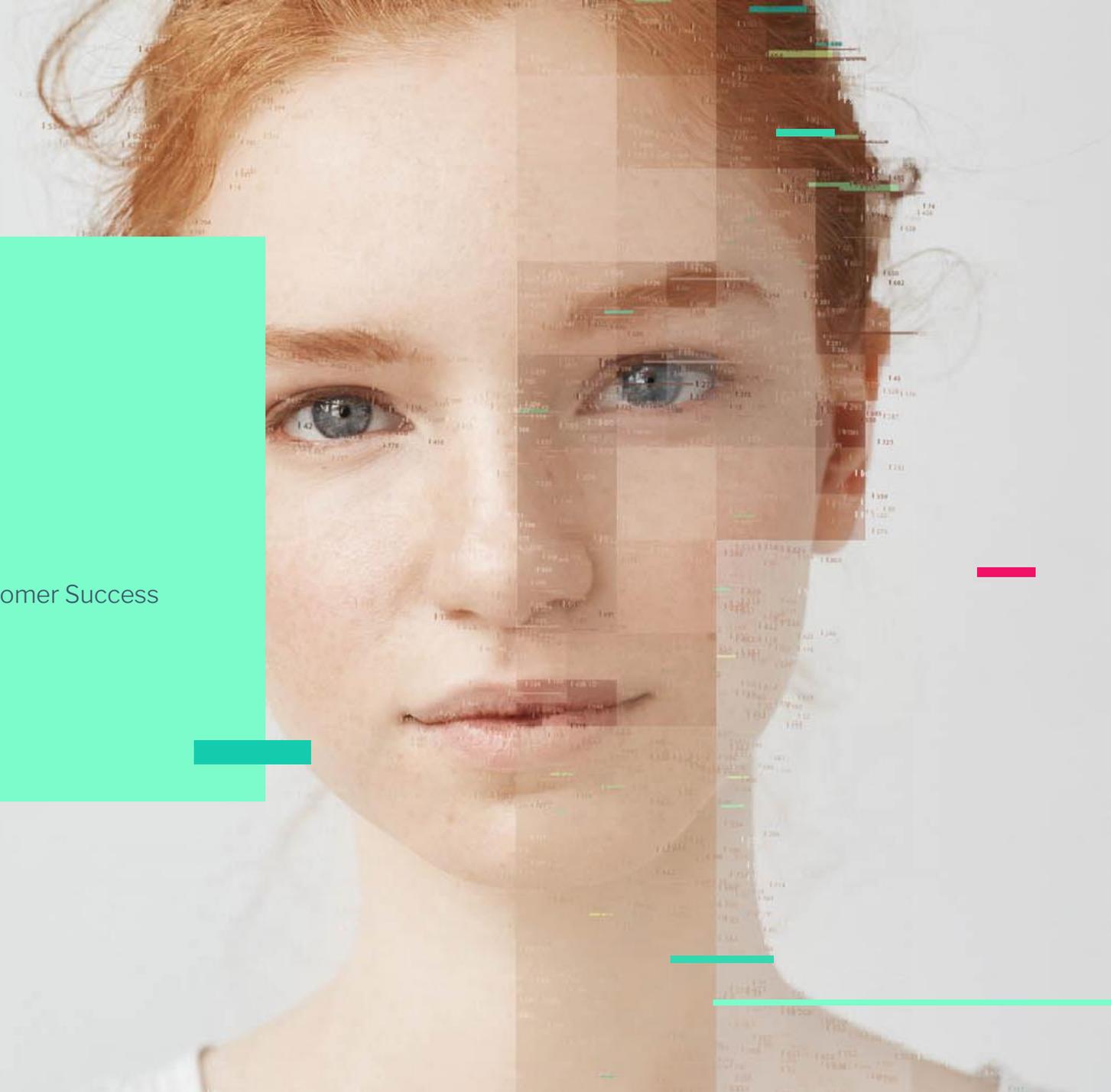




EVIDENTIQ
CLINICAL DATA SCIENCE GROUP

Intelligent Study Build:
EvidentIQ ODM.xml integration

Nicole Kuisle, Executive Director, Customer Success
April 2024



Marvin ePRO is a ODM native tool import files generated by the EvidentIQ Composer

Composer

General Approach

1. Create forms in the Composer which generates an ODM XML file
2. Upload ODM XML into Marvin
3. The eCRF which follows the ODM structure will appear on the screen

→ That's why EvidentIQ opted for the import method using the ODM-XML approach

The screenshot shows the EvidentIQ Composer interface. On the left, the 'Navigator' pane displays an 'ODM Tree' with a hierarchy of elements including 'Screening Visit', 'Visit 1', 'Visit 2', 'Unscheduled Visit', 'Concomitant Medications', 'Adverse Event', 'Disposition', 'Pain Diary', 'Subject Details', and 'KSS PT symptoms'. The 'Definitions' pane in the center lists various data elements with their SAS names and types, such as 'i_dt' (date), 'i_k_kss_pain_rest' (integer 2), 'i_k_kss_pain_walk' (integer), 'i_k_kss_pain_stairs' (integer), and 'i_k_kss_normal' (integer). The 'Data Definition' pane on the right shows details for the 'i_k_kss_pain_rest' element, including its OID, Name, Data Type (integer), Length (2), and Binary status (No). It also includes a 'Questions' section with a question text 'Pain during rest in the sitting or lying position' and a 'References' section.

Marvin

The screenshot shows the Marvin ePRO interface. At the top, a navigation bar contains five tabs: 'Unscheduled Visit' (C. 4), 'Concomitant Medications' (C. 4), 'Adverse Event' (C. 4), 'Disposition' (C. 4), and 'Pain Diary' (C. 4). The 'Pain Diary' tab is selected. Below the navigation bar, a sidebar on the left lists 'Subject Details' and three 'Pain Diary' entries for dates 4/14/2023, 4/13/2023, and 1/24/2024. The main content area displays the 'Symptoms' form. It includes a 'Measurement date' field with a date picker set to 'mm/dd/yy'. Below this is a question: 'Pain during rest in the sitting or lying position'. The answer is provided via a horizontal slider scale from 0 to 10, with the value currently set to 5. At the bottom, there is another question: 'Pain in level walking', with a corresponding slider scale from 0 to 10.

Demo

ODM XML export from OSB and into Marvin

Challenges for a smooth import from OSB to Marvin

Missing vendor extensions

Marvin is using vendor extensions to circumvent ODM limitations, e.g. display styles items, codelist etc.

OSB sponsor extensions

Marvin cannot process sponsor extensions from the OSB.

Missing conditional dynamics

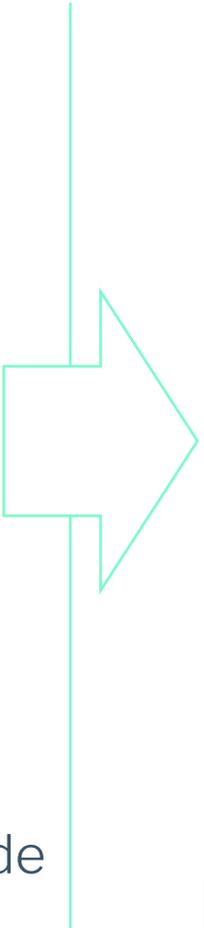
The ODM XML export contains only the form without any dynamics or data checks.

Form based export

Marvin imports only full Study Definitions and requires the Event.

Lack of checks between systems

Marvin lacks the ability to detect changes made to the eCRF templates, and it doesn't verify if they still adhere to the standard in the OSB.



Prior to uploading to Marvin, the ODM XML requires postprocessing.

We need to integrate software-specific enhancements with our in-house eCRF designer tool.

Intelligent Study Build

Oracle Clinical One API integration

Sarah Jamal, Senior Solutions Consultant, Oracle



Intelligent Study Build

Setup

1

The Power of
OpenStudyBuilder

2

Collaborating with
consistency

Automated build

3

Introducing the Oracle
Apex Tool

4

The Magic of
Synchronization

5

Revealing the Clinical
One Study Design

6

Validation Rules
and Custom Rules

Testing

7

User Acceptance
Testing



Form design, visit structure and rules



The Power of OpenStudyBuilder

- 1 Study design flexibility
- 2 Less manual effort
- 3 Reduced regulatory risk

OpenStudyBuilder's (OSB) capabilities, detailing the creation of visits, forms and form items, and the relevancy of OSB's extensions for defining complex validation rules

Common data foundation



Collaborating with consistency

- 1 Consistent metadata
- 2 Single data structure
- 3 Direct mapping between vendors

We go deeper into the collaboration with EvidentIQ, ensuring consistency with a common data structure for eConsent and eCOA forms

Live Video

The screenshot displays the 'Library' section of the OpenStudyBuilder application. The interface includes a top navigation bar with 'Studies' and 'Library' tabs, and a user profile 'MIRCEA BACIU'. A left sidebar contains a navigation menu with categories like 'Activities', 'Units', 'CRFs', and 'Compounds'. The main area shows a list of study concepts, each with a status indicator (Final or Pending), a 'Final' button, and a numerical value.

Concept Name	Status	Action	Value
Adverse Events	Final	Final	2.0
Previous Hypertension Treatment	Final	Final	3.0
Randomisation	Final	Final	2.0
Compliance with Study Medication	Final	Final	1.0
Haemoglobin Levels	Final	Final	1.0
Study Completion	Final	Final	2.0
Pregnancy Test	Final	Final	1.0
International Physical Activity Question...	Final	Final	2.0
IPAQ-SF	Final	Final	2.0
IPAQ-SF	Final	Final	2.0
IPAQ1	Final	Final	2.0
IPAQ2	Final	Final	2.0
IPAQ3	Final	Final	2.0
IPAQ4	Final	Final	2.0
IPAQ5	Final	Final	2.0
IPAQ6	Final	Final	2.0
IPAQ7	Final	Final	2.0
Test	Final	Final	1.0

API integration and automated workflows



Introducing the Apex Tool

- 1 Fast data transfer
- 2 Seamless integration
- 3 Reduced human error

Oracle Apex bridges OSB and Oracle Clinical One, emphasizing the efficiency of automating data transfer

Live Video

The screenshot displays a software interface for 'Clinical One Digital Gateway Automation Development'. The top navigation bar includes a home icon, the title 'Clinical One Digital Gateway Automation Development', and a user profile 'ddfdemo'. The left sidebar contains navigation items: Home, SDR to Clinical One, OSB to Clinical One (highlighted), IWR Integration, IWR Messages, Parameters, Execution Report, and Administration. The main content area shows a table of forms with columns for Form Name, Form OID, Form Type, and List Of Items. The 'Custom Vital Signs' row is highlighted. Below the table, there is a 'Visits & Forms' section with a tree view showing a hierarchy of visits and forms, including Baseline, Informed Consent and Demography, Vital Signs, Medical History/Concomitant Illness, Date of Visit, Previous Hypertension Treatment, Haemoglobin Levels, Pregnancy Test, eConsent, Randomisation, Week 4, Week 8, and Week 12. A video player interface is visible at the bottom, showing a play button, a progress bar, and a timestamp of 00:17,07.

Form Name	Form OID	Form Type	List Of Items
Study Completion	F.SICLUMP	Flat	Study Completion Status, Study Completion Date
Pregnancy Test	F.PREG	Flat	Pregnancy Test Date, Pregnancy Test Outcome
eConsent	F.ECON	Flat	Participant's Name (printed), Participant's Signature, Date informed consent obtained from participant, Investigator's Name (printed...
IPAQ-SF	F.IPAQSF	Flat	IPAQ1, IPAQ2, IPAQ3, IPAQ4, IPAQ5, IPAQ6, IPAQ7
Custom Vital Signs	F.CVS	Flat	Custom Height, Custom Weight, Custom Systolic Blood Pressure, Custom Diastolic Blood Pressure, Custom Gender, Custom Child Be...

1 rows selected Total 18

Visits & Forms

- Baseline
 - Informed Consent and Demography
 - Vital Signs
 - Medical History/Concomitant Illness
 - Date of Visit
 - Previous Hypertension Treatment
 - Haemoglobin Levels
 - Pregnancy Test
 - eConsent
- Randomisation
- Week 4
- Week 8
- Week 12

Data
synchronization and
automation tools



The Magic of Synchronization

- 1 Easy data sync
- 2 Reduced risk
- 3 Shortened study setup

The synchronization process is initiated in Oracle Apex, transferring the OSB study design into Oracle Clinical One and realizing the efficiency gains of automating data transfer

Live Video

Clinical One Digital Gateway Automation Development

Home \ OSB to Clinical One

Auto Refresh: Jobid: 37012

STUDY: Update Study

EDC: Add Visits Update Schedules Add Forms Add Form Items Add Validation Rules Add Forms to Visits

RTSM: Add Treatment Arms Add Kit Types

TEST Mode: C1 version: Add Custom Rules

Execution Id	Process Name	Current Process Name	Status	Status Message	So Far	Total Work	Progress	Created On	Last Updated On
37012	Populate C1 Study (EDC)		Executed Successfully				<div style="width: 100%;"></div>	2/14/2024	2/14/2024
37014	Update Study Chain		Executed Successfully				<div style="width: 100%;"></div>	2/14/2024	2/14/2024
37016	Add Visits Chain		Executed Successfully		7	7	<div style="width: 100%;"></div>	2/14/2024	2/14/2024
37018	Update Schedule Chain		Executed Successfully		6	6	<div style="width: 100%;"></div>	2/14/2024	2/14/2024
37020	Add Forms Chain		Executed Successfully		18	18	<div style="width: 100%;"></div>	2/14/2024	2/14/2024
37022	Add Items to Forms Chain	Add Items to Forms	Executing	Updated form: Date of Visit with 1 item(s)	1	1	<div style="width: 100%;"></div>	2/14/2024	2/14/2024

Rows: 5

Message: Created form with ID: 386B157C2E1C4C118EE0D425B9934C3F, name: Concomitant Medications

>> 4 minutes

00:33,70

Data mapping and validation technologies



Revealing the Clinical One Study Design

- 1 Precise data import
- 2 Trustful automation
- 3 Metadata integrity

The populated Oracle Clinical One study design, is compared against the initial OSB design

Live Video

The screenshot displays the 'Clinical One' interface for study 4003057_02. The top navigation bar includes 'Home', 'Data Collection', 'Study Supplies', and 'Reports'. The main content area is divided into two sections:

- Forms:** A grid of 18 forms, each with a title and a field count. The forms are:
 - Administration of Investigational ... (fields 1)
 - Adverse Event (fields 12)
 - Any Logs? (fields 2)
 - Compliance with Study Medication (fields 1)
 - Concomitant Medications (fields 10)
 - Custom Vital Signs (fields 6)
 - Date of Visit (fields 1)
 - ECG (fields 1)
 - e-Consent (fields 6)
 - Haemoglobin Levels (fields 5)
 - Informed Consent and Demography (fields 9)
 - IPAQ-SF (fields 7)
 - Medical History/Concomitant Illness (fields 6)
 - Pregnancy Test (fields 2)
 - Previous Hypertension Treatment (fields 8)
 - Randomisation (fields 3)
 - Study Completion (fields 2)
 - Vital Signs (fields 9)
- Scheduled Visits:** A vertical timeline showing the sequence of visits:
 - *Baseline
 - 14 days
 - *Randomisation
 - 28 days
 - *Week 4
 - 28 days
 - *Week 8
 - 28 days
 - *Week 12
 - 6 days
 - *End of trial

The interface also features a video player at the bottom with a progress bar and a timestamp of 00:22,65.

Rule-based validations



Validation Rules and Custom Rules

- 1 High study customization
- 2 Increased data quality
- 3 Streamlined testing

The integration of validation rules in Clinical One's study design, using specific forms as examples, and looking at custom rules in testing

Live Video

The screenshot displays the Clinical One web application interface. At the top left, the logo and text "Clinical One" and "Study: 4003057_02" are visible. The top right navigation bar includes "Chat & Help" with a user name "Mircea Baciu" and menu items for "Home", "Data Collection", "Study Supplies", and "Reports".

The main content area is titled "Vital Signs" and contains a green tip box: "Tip: For calculated doses, only required numeric questions can be used. For stratum groups and demography cohorts, only (a) required numeric questions with one inclusive range check and (b) required Drop-down questions that require users to select only one option can be used." A "Preview" button is located to the right of the tip.

The form consists of several sections:

- 6. Blood Pressure Location:** A dropdown menu with a "Select Answer" button and icons for help, copy, and delete.
- 7. Pulse:** A numeric input field with help, copy, and delete icons.
- 8. Height:** A numeric input field with a range constraint "Range between 120.0 and 210.0" and help, copy, and delete icons.
- 9. Weight:** A numeric input field with a range constraint "Range between 40.0 and 100.0" and help, copy, and delete icons.

On the right side, a "Details" panel shows the "Reference Code" as "F_VS" and a "Repeating Form" toggle switch.

At the bottom, a video player control bar shows a play button, a progress bar, and a timestamp of "00:11,50".

Live Video

The screenshot displays a web application interface for clinical trial management. At the top, the header includes 'Clinical One Testing' and 'Study: 4005057_01'. Navigation tabs for 'Home', 'Subjects', 'Supplies', 'Reports & Archives', and 'Analytics' are visible. The main content area is partially obscured by a modal dialog box titled 'Add Concomitant Medications'.

The 'Add Concomitant Medications' dialog box contains the following fields:

- Medication/Therapy
- Medication Indication
- Medication Dose
- Medication Unit
- Medication Dose Form
- Medication Frequency
- Medication Route
- Medication Start Date (DD-MON-YYYY)
- Medication Ongoing
- Medication End Date (DD-MON-YYYY)

Below the dialog box, a 'Rules' panel is visible, showing a list of rules for the form:

- Question Hint**
- Rules**
- View all Rules in this form (toggle)
- 3 Rules in total
- Publish All Approved Rules (0)
- rul_CheckCMEndDate**: The end date of the treatment must be after or the same as the start date of the treatment.
- rul_CheckCompletionDate...**: A check that the study completion date is later than all other dates entered into the study.
- rul_CheckEnteredConMed...**: If medication name is entered then dose, unit, frequency, route, indication, start date and...

At the bottom of the screen, a video player interface is visible, showing a progress bar and a timestamp of 00:54,60.

Testing mode and UAT workflow



User Acceptance Testing

- 1 Confirmation of protocol requirements
- 2 Validation of rules
- 3 Streamlined UAT

Validating the study design in the Testing mode. The validation is done by creating sites, subjects and adding data

Live Video

The screenshot displays the Clinical One interface for a study (4005057_01). The top navigation bar includes 'Home', 'Subjects', 'Supplies', 'Reports & Archives', and 'Analytics'. The main content area shows a subject profile for '001-002' with a 'Baseline' visit. A sidebar on the left lists various data entry sections: Forms, Date of Visit, Informed Consent and Demography, Vital Signs, Medical History/Concomitant Illness, Previous Hypertension Treatment, Haemoglobin Levels, and eConsent. The 'Date of Visit' section is currently active, showing a date field set to 'DD-MON-YYYY'. Below this, the 'Informed Consent and Demography' section contains fields for 'Date informed consent obtained', 'Subject No. [read-only]', 'Date of birth', 'Age', 'Sex', 'Ethnicity', and 'Race'. The 'Vital Signs' section includes 'Were vital signs performed?' and 'Date of examination'. A 'Question Hint' panel on the right indicates 'No hint provided.' and lists expandable sections: 'Rules', 'Answer & Visit History', and 'Subject History'. A video player control bar at the bottom shows a timestamp of 00:07:53.



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Tomasz Augustik, Product Owner
(for Marvin EDC and Integrator)

April 2024



Demo

Oracle ClinicalOne and Marvin ePRO

The demo will contain the following steps:

1. Open the ePRO system and create a new subject user
2. Switch into subject view and enter data into the ePRO
3. Go to ClinicalOne EDC and open patient file to demonstrate successful transfer of the data

Intelligent Study Build

Closing Comments

Srinivas Karri, Global Head, Oracle Centre of Excellence

TAKEAWAYS

1. OpenStudyBuilder maintains **metadata standards** across studies and systems
2. Automated study build **accelerates** study start and ensures **scalability**
3. Consistent data structure facilitates **collaboration**, enabling Sponsors to use **best-of-breed** for a competitive edge

Want to work with us to
build & automate
[your study](#)
in OSB and Clinical One?

Just SCAN the QR-code and
provide basic contact info
and we will be in touch.

