INTEGRATING CLINICAL CARE AND RESEARCH

eSource Checklist Overview

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Mission and Mechanism

• **Mission:** Create a quality management infrastructure to accelerate learning in medicine and drive healthcare value by integrating the processes of clinical care and research and by providing timely feedback on performance.

• **Mechanism:** Develop a solution to support structured data collection and feedback using quality data entered once and used many times. Implementation of best in class and interoperable systems leveraging existing capabilities where possible.

**eSource**

• eSource enables the seamless transfer of structured data using the IHE Remote Form for Data Capture (RFD), potentially using the IHE SDC (Structured Data Capture) Profile layered on top of IHE RFD.

**Checklists**

• Checklists enable clinicians, patients and others to efficiently capture the key information for themselves and simultaneously make this data available for appropriate reuse.
## Goal: Integration of Care and Research

### Ideal Data Source

<table>
<thead>
<tr>
<th>Patient Reported data</th>
<th>Provider Verified Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Athena Patient Questionnaires)</td>
<td>(Clinician Checklist)</td>
</tr>
<tr>
<td>History/Baseline Information</td>
<td>Clinical Stage → Treatment Plan</td>
</tr>
<tr>
<td>Acute Treatment-related symptoms</td>
<td>Surgical stage/Systemic Treatment</td>
</tr>
<tr>
<td>Follow-up</td>
<td>Treatment Summary</td>
</tr>
</tbody>
</table>

### Services/Processes
- Automated Risk Assessment
- Quality Improvement
- **Registry Reporting**
  - Clinical Research
- **Trial Matching and Registration**
- Internal Registries
- Automated services for patient/order set check list
- **Exchange of data for trials (eSource)**
- Community Networks/Services

### Automated Outcomes Tracking and Feedback
- Genetic Counseling
- Peer Support
- Smoking Cessation
- Social Work
- Psycho-Oncology
- Life Training

### Continuous Learning System

- Genetic Counseling
- Peer Support
- Smoking Cessation
- Social Work
- Psycho-Oncology
- Life Training
Good quality clinical care, clinical trials, registries, quality improvement, researchers, scientists, payors, regulators and others all require the same data elements...

Use the ‘right’ data many times

Enter the ‘right’ data once
Using dynamic XML-based checklists for data capture, rendering within the EHR using IHE standards
WHERE ARE WE TODAY?

From the Clinician’s, Researcher’s and Patient’s Point-of-View
Our Journey… Project INSPIRE
(INteroperability to Support Practice Improvement, Disease REgistries, and Care Coordination)

DEVELOPED UNDER ATHENA TO ADDRESS THE INEFFICIENCIES OF ACQUISITION OF CANCER REGISTRY DATA
What We Found: Clinical Care (1)

- Quality of information in EHRs is not what you think
  - 90% of EHR-using physicians admitted to copying and pasting, causing risk:
    - Incorrect information/diagnoses propagated forward
    - Perpetuates out-of-date information
    - Leads to less independent thinking of the case

- Irony of EHRs, physician productivity and ‘information finding’
  - Data shows physician productivity is not improved by EHRs and negatively impacted due to documentation challenges
  - ‘Note Bloat’
    - Clinicians spend time:
      - ‘Constructing’ large, verbose, narrative notes
      - Sifting through bloated notes of others to find key pieces of clinical data to care for the patient
# What We Found: Clinical Care (2)

## Overarching Pain Points for Clinicians

<table>
<thead>
<tr>
<th>Pain Point Category (group)</th>
<th>UC Davis</th>
<th>UC Irvine</th>
<th>UCSD</th>
<th>UCSF</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Difficult to Find Information</strong></td>
<td>8</td>
<td>8</td>
<td>24</td>
<td>20</td>
</tr>
<tr>
<td><strong>EMR Interface &amp; Functionality</strong></td>
<td>13</td>
<td>13</td>
<td>8</td>
<td>19</td>
</tr>
<tr>
<td><strong>Burdensome Process &amp; Deficiencies</strong></td>
<td>13</td>
<td>11</td>
<td>13</td>
<td>10</td>
</tr>
<tr>
<td><strong>Collaboration among groups</strong></td>
<td>8</td>
<td>3</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td><strong>Variability of Data Coding</strong></td>
<td>4</td>
<td>2</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td><strong>Structured Data &amp; Synoptic Reporting</strong></td>
<td>6</td>
<td></td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td><strong>Visibility of Clinical Trials</strong></td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cross UC Collaborations</strong></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

>350 pain points codes into 8 overarching pain point categories
Only site-specific pain points presented on this chart

Number of Records:
- 1
- 5
- 10
- 15
- 20
- 24
What We Found: Clinical Care (3)

Patient workflow processes are fairly consistent across UC Sites

BUT

Data elements are captured and utilized inconsistently across UCs
duplication • missing • responsibility • source/location
Clinical Care & Research: EHRs and EDCs

Typical process for clinical research today

- ‘Abstract’ from EHR records instead of paper
- Data quality is still very poor
- High cost of source data verification
- ‘Forage’ for information but now across the EHR because data ‘location’ and recording is not standardized
- Unable to easily and effectively determine protocol feasibility or match patients to trials
Lack of Quality, Re-usable, Structured and Semantically Interoperable Data Impacts:

Time to bring new treatments to patients:

Cost to deliver care as well as to develop new treatments:

Quality of data used for decision making:

Source: FasterCures (http://timeequalslives.org)
From the Patient’s Point-of-View

• Patients can’t wait 10-20 years for new treatments to come to market

• Patients expect and we should provide quality care at a reasonable cost
Does This Sound Familiar?
By Building Trust in the System & Accessible / Consistent Data…

• Time saving
  • Not having to search/hunt for data

On average, physicians lost 42 minutes of free time per clinic day by transitioning to an EHR

• Reduced frustration and errors
  • Reducing duplicate (potentially inconsistent) data

“Copying and pasting lab results into notes…made them bulky and harder to see the wheat from the chaff”

• Multiple use of the same data
  • Treatment planning
  • Registries
  • Trials

In an Ideal World…

“Enter Once”

Single Source of Truth

“Use Many”

Coordination of Patient Care

Checklists for consistency, correctness, quality, and safely

Facilitate compilation of medical records (and increase patient face time)

Quick review of patient history with only relevant data

Effective & Timely Registry Utilization
APPROACH

eSource + Clinical Checklist Solution
Standards-based Solution

EHR (eSource Documents and Data)

Healthcare Delivery

Medical Research

Integration Profiles (RFD, SDC)

eCRFs

Auto reconciliation for source data verification

*Adapted from CDISC presentation by Becky Kush and Bron Kisler
IHE RFD – What is it?

• Integration profile co-developed by Integrating the Healthcare Enterprise (IHE), HL7 and CDISC
  • A standard for research data collection from EHRs
  • Allows EHR platform to display a data collection form sourced from the CS platform
  • Pre-populates form with data sourced from Continuity of Care Document (CCD); FHIR pilot underway
  • CCD contains snapshot of patient chart (XML format)
    • Wrapper includes context – study, patient, form, etc…
• Epic GE, Cerner, Allscripts, Greenway, Tiani Spirit and eMDs, among other EHRs have implemented RFD.
Structured Data Capture

• Part of Standards and Interoperability Framework of the Office of the National Coordinator for Health Information Technology (ONC)

The S&I Framework is a collaborative community of participants from the public and private sectors who are focused on providing the tools, services and guidance to facilitate the functional exchange of health information. Learn more at www.siframework.org

• The Structured Data Capture (SDC) initiative is currently piloting and validating a standards-based data architecture so that a structured set of data can be accessed from EHRs and be stored for merger with comparable data for other relevant purposes.

• SDC Profile
  • A natural stack exists for Future Content Profiles needing RFD
  • Secure RFD (transactions and auditing) exist in one Profile
  • Future Content Profiles using RFD need only their dc
  • Aligns with federal partner’s strategic objectives including ONC, NLM, AHRQ

• ONC has been working with Epic and EHR vendors on piloting the IHE SDC profile.
SOLUTION OVERVIEW

Strategic View: eSource Checklist
Environmental Context

Semantically-aware cloud and on premise data Integration

- Clinician Checklist
- force.com EDC I-SPY Clinical Trial
- Athena HQS
- Genomic profiling for BRCA, BROCA, SNPs
- Biopharma & Device Orgs
- Payors
- Regulators
- iDA
- SH
- Adaptive Learning Engine
- Randomization Engine
- Master Patient Index
- Hospital Systems and Data
- EHR
- Clinicians
- CTMatch Mobile
- Environmental Context
- Biopharma & Device Orgs
- Payors
- Regulators
- iDA
- SH
- Adaptive Learning Engine
- Randomization Engine
- Master Patient Index
- Hospital Systems and Data
- EHR
- Clinicians
- CTMatch Mobile
Workflow Example

A Patient Care System

1. Selects Checklist
2. Displays Checklist
3. Completes Checklist
4. Request Checklist
5. Pre-Populated Checklist
6. Submit Checklist
7. Archive Checklist
8. Find Checklist
9. Auto population by EHR

Clinician Checklist

10. Semantic Mapping
11. ODM XML (CDASH) to pre-populate eCRF
12. Confidential Data Coordination Center
13. Report/Store & Analyze

EHR Storage

Other EHR

Epic

Audit Trail

Checklist Data

Archived Checklists

Requestor

Trial.XML Generator

Case Report Forms

Structured Eligibility Criteria

Feasibility CT Matches

CTMatch Mobile

Patient/ Clinician Registration

Master Patient Index

Patient Survey Data

Trial Info to EHR

Pre-populate Forms

Semantic Services Ontologies & Terminologies

Semantic Mapping

Contextual Answer Repository

HQS

ODM XML (CDASH)

Another Therapeutic Area Trial

I-SPY 2 Clinical Trial

IHE RFD - SDC

SMART Integration Capability

E Source Widget

WAVE

Salesforce.com

force.com

EDA

Study Sites Case Report Forms

Data Coordinating Center

Randomization Requestor

TRIAL.XML Generator

Another Therapeutic Area Trial

AEs

SGT

SMART Randomization Engine

caTissue

Reporting

iDash

SMART Randomization Engine

WAVE

Athena Color & Subject ID Mapping

Patient to Athena Color & Subject ID Mapping
Assumptions

- Use of FHIR (Fast Healthcare Interoperability Resources) for HL7 messaging
  - Epic has prototype FHIR implementation
    - [https://open.epic.com/Interface/FHIR](https://open.epic.com/Interface/FHIR)

- Leverage more lightweight access to HL7-defined data models
  - Developer friendly RESTful API
  - Patient chart resources represented in JSON or XML format – e.g., demographics, medications, etc.
SCOPE AND PLAN

Pilot Project – First 6 Months
eSource Checklist Scope

• Initial development will be at UCSF and use Epic as the Electronic Health Record (EHR) System and I-SPY for the Clinical Trial.

  • **Release 1:**
    • The pathologist signs on to the CS system using a mobile device.
    • The pathologist enters the required data for the primary endpoint (pCR) of the I-SPY 2 Trial (and I-SPY 3 if up and available).
    • The I-SPY eCRF (Post-Surgery Summary Form in the case of I-SPY 2) is updated.

  • **Release 2:**
    • An invitation is sent via email to the pathologist asking them to complete, within a week of surgery, the Checklist that contains the required data (pCR) for the primary endpoint (pCR) of the I-SPY 2 Trial (and I-SPY 3 if up and available).
    • The pathologist signs on to Epic and accesses the Checklist form.
    • Epic pre-populates the Checklist form with structured data already in Epic.
    • The I-SPY eCRF (Post-Surgery Summary Form in the case of I-SPY 2) is updated.

• Future releases will move us toward the ultimate goal which is to create an EHR-agnostic and Therapeutic Area-agnostic that eliminates manual re-entry and minimizes or eliminates manual source data verification.
Plan For eSource Pathology Checklist: Release 1 and 2

Progress-to-Date

- Defined overarching goals
- Finalized straw man business processes
- Identified members of steering committee and advisory council
- Defined and agreed to: detailed plan for Release 1 and 2, initial use cases, high-level architecture and non-functional requirements, estimated budget and resource needs

Key Project Milestones – Release 1 and 2 (6 Months)

<table>
<thead>
<tr>
<th>Week</th>
<th>Milestone Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Lift Off</td>
</tr>
<tr>
<td>2</td>
<td>PoC Complete; Go/No Go to Dev of Release 1 Pilot</td>
</tr>
<tr>
<td>4</td>
<td>Week 8: Sign-off on requirements &amp; plan for Release 1 and 2</td>
</tr>
<tr>
<td>6</td>
<td>Week 14: Complete Testing of Release 1 in Real-World Clinic Setting</td>
</tr>
<tr>
<td>8</td>
<td>Week 16: Evaluate Release 1 Pilot</td>
</tr>
<tr>
<td>0</td>
<td>Week 18: Release 2 PoC Complete; Go/No Go to Dev of Release 2 Pilot</td>
</tr>
<tr>
<td>2</td>
<td>Week 19: Complete Testing of Release 2 in Real World Clinical Setting</td>
</tr>
<tr>
<td>4</td>
<td>Week 20: Demonstrate at CDISC International Interchange 9-13 November 2015</td>
</tr>
<tr>
<td>6</td>
<td>Week 26: Evaluate Release 2 Pilot</td>
</tr>
</tbody>
</table>

Implementation Principles

- Think BIG, Start small, Prove Value (or fail early), Scale up
- Incremental, multi-phased, risk-based program execution aligned with strategic goals
- Significant focus on usability, fitting within clinician workflow and providing value back to clinicians
- Continuous process improvement: implement solution in new ways to get new results
- Governance to break down silos with global, cross-functional stakeholder representation
- Use of de facto, globally adopted industry standards (CDISC, HL7, IHE) from bench-to-bedside and back
What is after Release 1 and 2?

- Enable population of local registries
- Trial Matching using CTMatch to map patients to clinical trials and notify their Clinician about their eligibility
- Automated population of CRFs for patients who sign up for a particular trial
- Automate orders
- Provide information for billing to Payors
- Integration of social and patient services based on questionnaires (F/U) and eSource checklists
- Checklists for additional therapeutic areas
- Capture and integrate data from wearable devices
- And many more TBD…
Governance (Proposed)

**Steering Committee**
Laura Esserman, Chair
1. UCSF (Sue Dubman, Overall Program Manager)
2. UCD (Mike Hogarth, eSource Program Advisor)
3. CDISC (Becky Kush)
4. FDA (Ron Fitzmartin/Mitra Rocca)
5. I-SPY (Meredith Buxton)
6. Tech Partner CEO

- Champions the Program
- Defines strategic priorities
- Guides implementation plans
- Resolves cross-functional issues that cannot be resolved at the Advisory Council level

**Advisory Council Chair & Overall Program Manager (Sue Dubman)**
1. ASCO (Robert Miller)
2. CDISC (Landen Bain)
3. CDC (Michelle Williamson)
4. EMEA (Fergus Sweeney)
5. Epic (Nancy Smider)
6. FDA (Mitra Rocca)
7. HL7 (Chuck Jaffe)
8. NCI (Warren Kibbe)
9. ONC & HIMSS (Mark Roche)
10. CAP and CCR
11. Biopharma Reps (TBD)
12. UCOP (Tom Andreola and Karen DiGiorgio)
13. UCSF Med Center IT (Heidi Collins)
14. UCSD, iDASH (Lucila Ohno-Machado)
15. Tech Partner, VP Product Dev.

**Core Implementation Team**
Implementation Project Manager (Sue Dubman/Tech Partner CTO)
1. Data Managers
2. Engineers/Architects (Tom Bechthold, Alex Koorkoff, Dan Dumitru, Jitterbit)
3. QA Staff (Jenny Domnich, QA Lead)
4. Coordinators
5. SMEs (Standards, Epic, Other)
6. Tech Partner Engineers, QA

**Operations Support**
1. Applications Support
2. IT Support
3. Training & Communications
4. Systems Admin

- Provide insight into stakeholder needs
- Guide change management activities
- Guide architectural decisions
- Help resolve implementation issues that cannot be solved by the Core Implementation Team
- Guide Communications & Training plans
- Ensure cross-functional vetting and awareness of Program activities
- Act as evangelists for the Program
VALUE PROPOSITION

eSource Checklist
Value Proposition

- Significant time/cost savings from enter once – use many times
  - Minimize transcription errors, improve data quality, reduce data collection burden
  - Save Clinical Research Coordinator time

- Reduced critical path cycle time for trials through elimination of data transformation and data re-use
  - Estimated 20-30% savings off the cost of a $100MM Phase 3 trial
  - More effective treatments to market faster, cheaper

- Better data, better models, accelerated trials, smaller trials
  - Seamless transfer of “comparable” data across organizations supporting faster decision making
  - Facilitates data provenance
  - RFD specification dictates archiving/auditing

- Improved quality of care for same or lower cost
  - Supports feedback needed for learning health care system
  - Reanalysis of existing sets of studies replaces costs of re-doing clinical trials
**Value for Drug Development: Quantitative and Qualitative Benefits for a Single Large ($100 Million) Phase 3 Trial**

### Quantitative Benefits

<table>
<thead>
<tr>
<th>Process</th>
<th>Quantitative Benefits</th>
<th>After Rollout of</th>
<th>Impact &amp; Magnitude</th>
<th>Potential Savings for a Single $100 million Phase 3 Trial ($'000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project / Study Start-Up</td>
<td>Structured Data Capture can be used to more accurately match patients to a Structured Protocol and can be done at the Point of Care. It also can improve protocol feasibility analysis.</td>
<td>v3</td>
<td>25% of Patient Recruitment Cost</td>
<td>$3,000</td>
</tr>
<tr>
<td>Site Monitoring</td>
<td>Time savings from reduction in manual hand-offs and SDV (Source Data Verification)</td>
<td>v2</td>
<td>67% of Site Monitoring Costs</td>
<td>$17,688</td>
</tr>
<tr>
<td>Clinical Data Management</td>
<td>Efficiencies gained from re-use of data collected at the Point of Care</td>
<td>v2</td>
<td>Additional 5% of CT Ops Costs</td>
<td>$200</td>
</tr>
<tr>
<td>Analysis and Reporting</td>
<td>Efficiencies gained from re-use in data analysis, safety assessment, table prep, report generation and clinical assessments (time/resource)</td>
<td>v2</td>
<td>20% of CT Analysis Costs</td>
<td>$1,600</td>
</tr>
<tr>
<td>Other – Reg. Submissions?</td>
<td>2-5% reduction in time to respond to some types of HA Queries [see Analysis &amp; Reporting]</td>
<td>v2</td>
<td>5% of CT Analysis Costs</td>
<td>$400</td>
</tr>
</tbody>
</table>

#### Total Quantitative Impact

- **At end of V2**: $22,888
- **Additional at end of V3**: $3,000
- **Total Dollars ($'000)**: $23,288
- **% of Phase 3 Trial Operations Cost**: 29.1%

### Qualitative Benefits

- Basis for clinical care and clinical research integration
- Easier, cheaper integration of data from care with fewer costly data conversions
- Reduced critical path cycle time from start to end through elimination of data transformation and data re-use
- Use of TA efficacy data stds to enable development of (a) protocol templates to be applied to studies in that area leading to easier study start-up and (b) standard statistical models for that type of data
- Reanalysis of existing sets of studies replaces costs of re-doing clinical trials
- Integration with EHR / EMR to reduce site monitoring, yet improving data quality
- Expedite the time to market
- Proves value of other biopharmaceutical investments (i.e., CDISC TA Standards and CDISC SHARE).
- Better data, better models, accelerated trials, smaller trials
- Seamless transfer of “comparable” data across the org. supporting faster decision making
- More effective treatments to market faster, cheaper
- Improved quality of care for same or lower cost

**Assumptions**
- $100 million for a Phase 3 Trial of which 80% is spent on CT Operations
- 15% of Phase 3 Operational budget associated with patient recruitment
- 10% of Clinical Trial Operations for Costs are for Reporting and Analysis
- 33% of Clinical Trial Operations Costs are for Site Monitoring
The Time is Now

- eSource Guidance from FDA
- Structured Data Capture from ONC
- Use by Centers for Disease Control
  - Various public health profiles from QRPH
  - KeyHCSF project from CDISC
- IOM meta-project
- Adoption in Europe
  - EHR4CR
  - keyCRF project through PhUSE Semantic Web initiative
  - SALUS semantic metadata repository
- CDISC SHARE
ROAD TO SUCCESS FOR eSOURCE
CHECKLIST
Steps to Success

• Appropriate funding and resources

• Commitment by all parties to make this happen
  • Superheroes that live the mission

• Partnership relationships have formal status with clear responsibilities and decision processes

• Focus, focus, focus
  • Think **BIG**, start small, **prove value** then **scale up**

• Deep understanding of clinical workflow and usability needs

• Eat the elephant one bite at a time

• Open, shared communications

• Leverage the significant investments that we have already made and working well
Significant Achievements to Date That Can Be Leveraged

REGULATORY & STANDARDS

US HHS/ONC HITSP Interop Spec – EHRs for Research Use Cases (IHE RFD, CDASH, HL7 CODA)

CDISC Healthcare Link Guide Published

FDA eSource Guidance Published

CDISC CDASH Standards Published 18 domains

CDISC Guidance for eSource with I2 requirements (2010)

EMEA Link Guide Published

CFAST Formed to accelerate development of TA Standards

Breast Cancer TA Standards Group Kick-off

FDA publishes draft guidance for use of pCR in neoadjuvant trials for accelerated approval

FDA requests new security-related CDISC IHE and RFD Features

EMA draft guideline on pCR as an endpoint in neoadjuvant breast cancer studies

FDA publishes final guidance on pCR for accelerated approval

CDISC eSHARE available for Platinum Members

REGULATORY & STANDARDS

Graduation of first 2 drugs from I-SPY 3

First drug identified for I-SPY 3

UCSF/QL funds CTMatch

Blue Shield leads payer stakeholder group coverage with evidence development

UC Health adopts personalized screening trial and plans implementation

2011 & earlier

2012

Q1 2013

Q2 2013

Q3 2013

Q4 2013

Q1’14

Q2’14

Q3’14

I-SPY 2 Trial opens (2010)

Athena goes live at 5 UC Med Centers (2011)

breastcancertrials.org launches

I-SPY 2 Trial opens (2010)

Athena goes live at 5 UC Med Centers (2011)

breastcancertrials.org launches

Athena enrolls its 10,000th patient

Athena goes live with survivorship questionnaire (2012)

Athena added risk assessment models and web services into routine screening

I-SPY 3 Master Protocol approved by FDA

I-SPY 3 Consortium Planning Begins

I-SPY 3/FDA meeting on regulatory and data management

Graduation of first 2 drugs from I-SPY 2

Athena enrolled its 50,000th patient

Athena personalized screening trial approved by Athena Executive leadership

Athena enrolls its 10,000th patient

Athena enrolls its 50,000th patient

Athena personalized screening trial approved by Athena Executive leadership

UCSF/QL funds CTMatch

First drug identified for I-SPY 3

Blue Shield leads payer stakeholder group coverage with evidence development

UC Health adopts personalized screening trial and plans implementation
Final Thoughts

This is hard but…

“Never doubt that a small group of committed people can change the world. Indeed it is the only thing that ever has.”

-Margaret Mead

No time to waste!

“Every minute wasted because of lives altered or cut short by disease is time we can never have back. And yet, when a scientific breakthrough is discovered, it could take 15 years to turn it into a therapy and cost billions of dollars. Imagine if this were faster…”

- FasterCures
Discussion
Related Documents

The following information is available on the Web:

- IHE SDC Profile – see: http://ihe.net/uploadedFiles/Documents/QRPH/IHE_QRPH_Suppl_SDC.pdf
- ONC SDC Development – see: http://wiki.siframework.org/Structured+Data+Capture+IG+Development
- HIPAA requirements – see: http://www.hhs.gov/ocr/privacy/hipaa/understanding/
- CDISC SHARE – see: http://www.cdisc.org/cdisc-share
- HL7 FHIR – see: http://www.hl7.org/implement/standards/fhir/
- FHIR SDC Profile Development – see: http://wiki.siframework.org/Structured+Data+Capture+IG+Development
- BRIDG – see: http://www.bridgmodel.org/
- Color Genomics – see: https://getcolor.com/#!