

**National Center for Immunization and Respiratory Diseases
(NCIRD)**

Modernizing Vaccine Management

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Presentation Objective

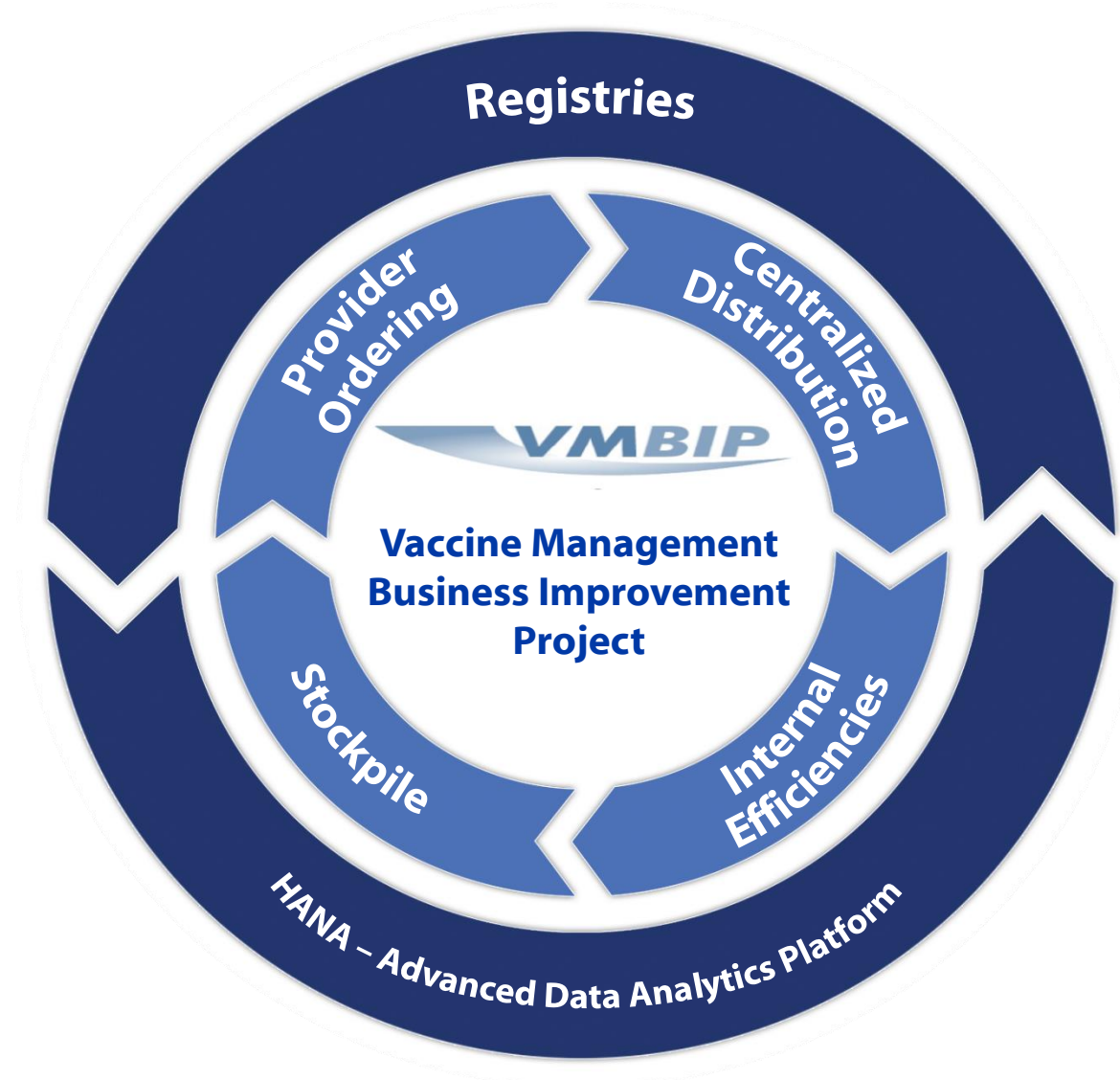


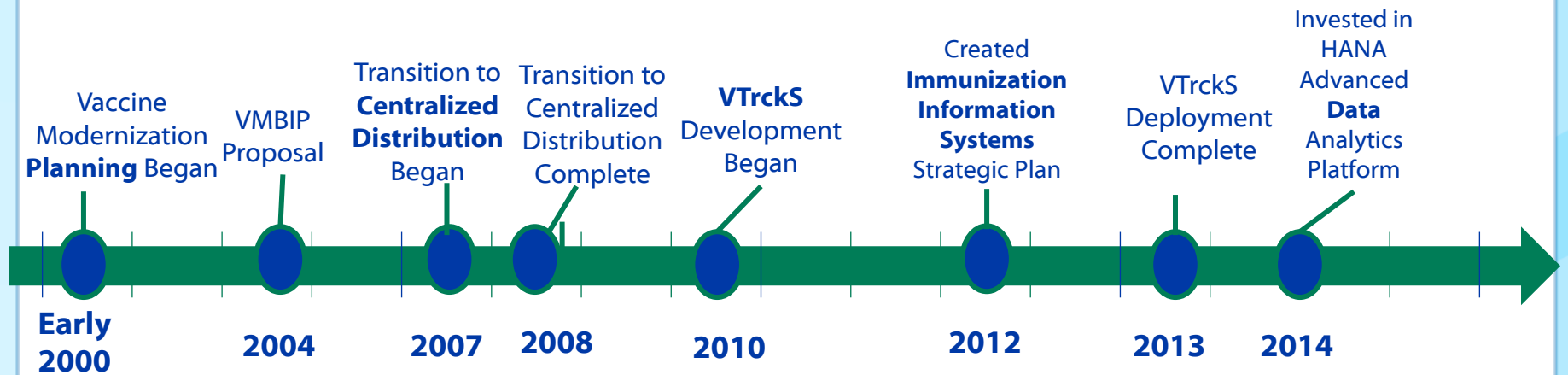
- ❑ To describe NCIRD’s strategic approach to improving the oversight, management and accountability of CDC’s immunization program including:
 - Centralized Vaccine Distribution
 - Vaccine Tracking System (VTrckS)
 - Immunization Information Systems (IIS)
 - HANA – Advanced Data Analytics Platform

Agenda

- ❑ Background
- ❑ Centralized Vaccine Distribution
- ❑ Vaccine Tracking System (VTrckS)
- ❑ Immunization Information System (IIS)
- ❑ Moving Forward
 - The Power of Information
 - Hana – Advanced Data Analytics Platform

Program Background: Modernizing Vaccine Management





Vaccine Modernization Management Timeline Early 2000 and Beyond!

Centralized Vaccine Distribution: Overview

- ❑ Previous Distribution Model:
 - 64 independent distribution systems – 60% commercial distributors, 40% in-house
 - 400+ depots nationwide
 - Some providers required to pick-up vaccine
 - High risk of vaccine cold chain errors

- ❑ Transition to centralized, commercial distributor began in February 2007 and was completed in June 2008.

- ❑ Current Model
 - Vaccines are now distributed from two national locations
 - Eliminates need for multiple state and health department depots
 - Reduces storage risks and distribution costs

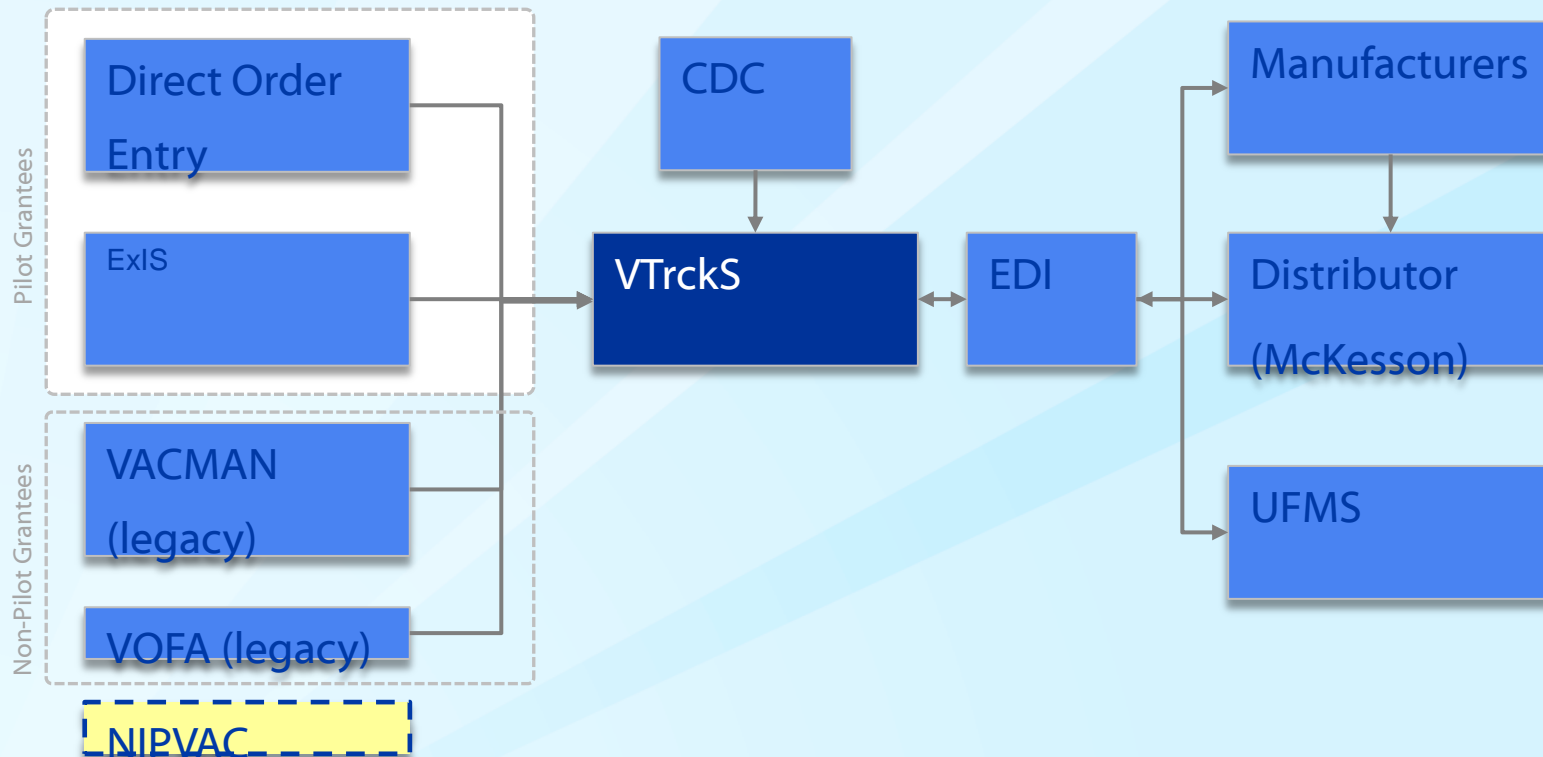
Centralized Vaccine Distribution

Benefits:

- Decrease in the overall size of the inventory
- Vaccine delivered directly to provider from distributor
- Increase in federal visibility to vaccine
- Vaccine insured prior to/during distribution



VTrckS High-Level System Landscape



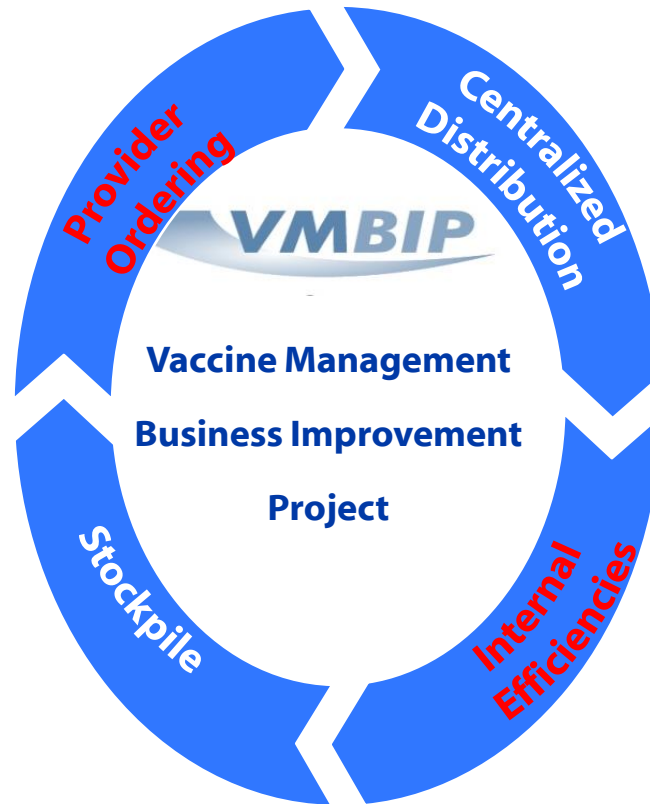
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CDC Infrastructure Supporting VTrckS

Vaccine Tracking System (VTrckS): Overview

Vaccine Tracking System (VTrckS)

- An integrated system that supports end to end vaccine management
- Standardized and automated system that supports on-line provider ordering
- Business rules facilitate grantee order review
- Provides monitoring and replenishment of CDC's vaccine inventory
- Manages CDC's vaccine purchase contracts, state vaccine budgets and spending plans
- Near real-time inventory visibility and order status
- Improved operational efficiency and controls



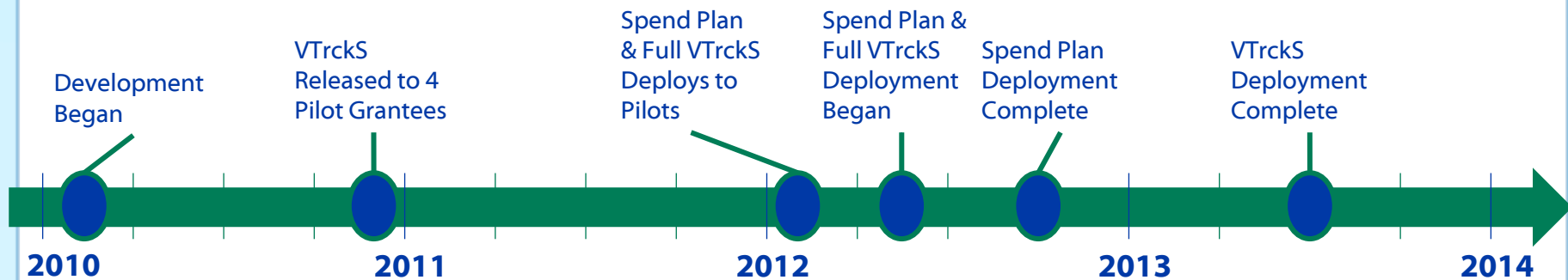
Internal Efficiencies

- Improved funds management processes
- Improved inventory management results in enhanced visibility and significant savings
- Reduced administrative processes

Stockpile

- Migration of part of the Pediatric Vaccine Stockpile from the manufacturer to the distributor
- Improved preparedness capabilities for public health crises

Vaccine Tracking System (VTrckS): High-level milestones & accomplishments



VTrckS Go-Live Was December 13, 2010

- 4 pilot grantees used VTrckS directly
- Orders from remaining 58 grantees interfaced through VTrckS
- Back office legacy system was retired, Funds, contracts, and inventory management was transitioned to VTrckS

Spend Plan & Full VTrckS Deployment Began May 1, 2012

- Spend Plan was deployed to all 62 grantees by Aug. 1
- Full VTrckS solution was deployed to all grantees by June 2013
- Forecasting legacy system was sunset in Oct. 2012 & Front End legacy systems were sunset in Oct. 2013

VTckS O&M Leadership Update Report – as of 5/7/2015

Order Type	# of Orders	\$ Amount	Open 30 days
Purchase Orders	3,077		--
Sales Orders	6,055	\$12,776,996.00	--
Returns	1,263	\$54,782,310.69	--

Total number of Vaccine Orders, Vaccine Doses and Dollars entered into VTckS

Total Orders	=	since 12/13/10	5,075,062
Total Doses	=		384,256,454
Total Dollars	=		\$16,731,447,735.84

VTckS EDI Reconciliation W/E (5/3/2015)

Sales Orders to McKesson	5,644	ASN's from McKesson	26,631
Purchase Orders to Manufacturer	3,112	Total IDOC Errors during Report Period	0
Sales Orders Confirm. from McKesson	5,617	Total IDOC Errors Remaining Open	0
Order Changes to McKesson	514	Total IDOC to EDI Messages	
Goods Movement from McKesson	3,014		

VTrckS O&M Leadership Update Report – as of 5/7/2015

Year	Total Orders	Total Doses	Total Dollars
2010	61,916	2,959,092	\$ 132,242,513.17
2011	1,825,947	93,013,292	\$3,849,642,901.22
2012	1,726,915	89,024,032	\$3,741,498,526.12
2013	745,260	90,805,296	\$3,827,623,858.60
2014	573,314	86,517,963	\$3,990,665,423.91
2015	141,710	21,936,779	\$1,189,774,512.82

Vaccine Tracking System (VTrckS): Key Success Factors and Lessons Learned

□ Key Success Factors

- Engaging directly with all key internal and external stakeholders in initiation, planning and execution phases
- Expediting the transition of awardees to VTrckS
- Continuous communication with grantees and contractors
- Providing direct onsite/phone support to awardees during go live through implementation of Tiger teams (CDC staff, contractors) & Command center (including SAP consultants and CDC staff on phone)
- Ongoing VTrckS training for awardees
- Leveraging stakeholder support and consistent feedback



□ Lessons Learned

- Engaging the right stakeholders throughout the project lifecycle, particularly the development phase
- Identifying technology infrastructure requirements upfront to exchange business transaction data to internal and external stakeholders
- Changing the labels in the user interface, resulting in an overall better end user experience and adoption

Challenges

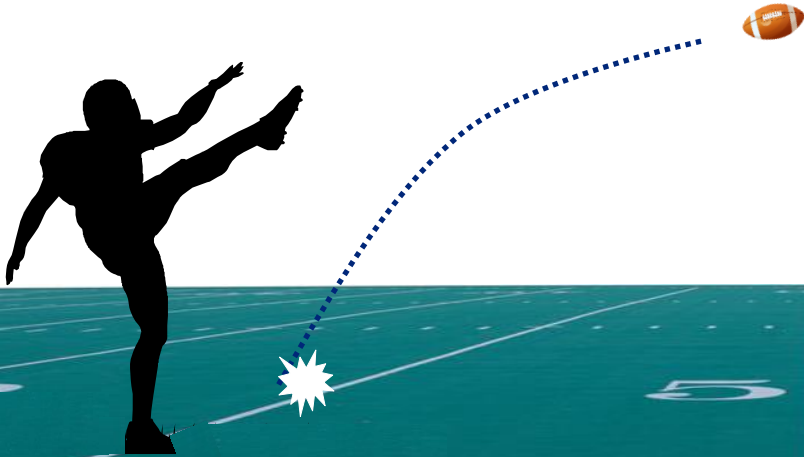
- Resistance to Change
- Gaining Buy-in
- Perceived Loss of Control
- Knowing What You Don't Know!
- Expectation Setting



Immunization Information Systems (IIS): IIS Strategy

Vision for the Future of IIS

“Real time, consolidated immunization data and services for all ages are available for authorized clinical, administrative, and public health users, and consumers, anytime and anywhere.”



❑ To further enhance IIS, NCIRD launched the creation of the IIS Strategic Plan in October 2012.

❑ Objectives of the IIS Strategic Plan:

- To serve as a guide for NCIRD’s future investment decisions
- To strengthen the use of IIS to help NCIRD and awardees gain better insights into vaccine coverage, trends, and needs nationwide

❑ The IIS Strategic Plan presents short-, mid-, and long-term goals and initiatives across five focus areas, nationwide leadership, sustainability, service delivery, capacity/infrastructure, and interoperability/data management

Moving Forward: **HANA- Advanced Data Analytics Platform**

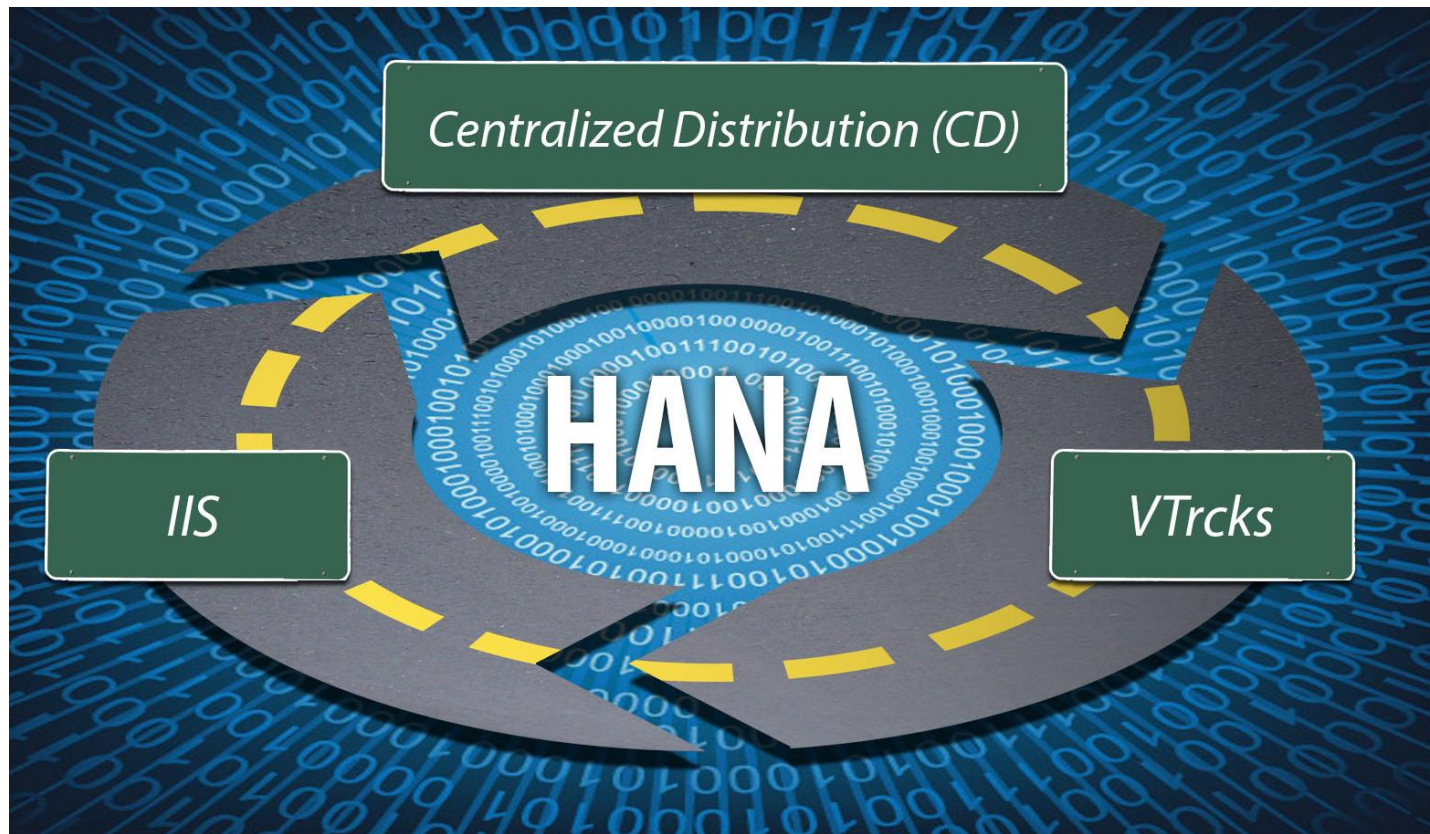
- ❑ **What is SAP HANA?**
 - In-memory data platform for performing real-time analytics, and developing and deploying real-time applications.

- ❑ **Advanced Data Analytics Objectives**
 - Improve advanced real-time scalable data analytics capacity and capability for NCIRD programs
 - Provide a platform for rapid data analysis for large (big) data for various programs in the Center as a shared service
 - Ability to integrate multiple data sources irrespective of data types and formats

- ❑ **Expected Benefits of Platform**
 - Enable awardee reports (used for immunization management) to be more scalable and timely
 - Establishes capability to process (more efficiently) immunization record info used to inform immunization best practices
 - Able to derive new insights (predictive analysis) from multiple data sources which can be integrated in the platform in a standardized manner

Moving Forward: The Power of Information

- Immunization Management Technology Highway



Thank You!

