



**An
Phríomh-Oifig
Staidrimh**

Central
Statistics
Office

Covid19 Data Research Hub @ CSO

- broad overview

Overview

- About CSO
- CSO Infrastructure ADC
- CSO Infrastructure RCU
- C19 data journey
- C19 Data Research Hub

John Dunne
SDAP Seminar

HRB
21st Sep 2022



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Statistics >

People and Society

- > Population
- > Education
- > Births, Deaths & Marriages
- > Crime and Justice
- > Social Conditions
- > Health
- > Information Society
- > Housing and Households

Labour Market and Earnings

- > Labour Market
- > Earnings

Business Sectors

- > Agriculture
- > Construction
- > Digital Economy
- > Industry
- > Multisectoral
- > Science & Technology
- > Services
- > Tourism & Travel
- > Transport

Economy

- > International Accounts
- > Prices
- > National Accounts
- > Government Accounts
- > External Trade
- > Key Economic Indicators
- > IMF Summary Data Page

Environment

- > Environment Accounts
- > Environment Indicators
- > Environment Statistics
- > Climate and Energy

General Statistical Publications

- > Geographical Profiles of Income in Ireland
- > Brexit - Ireland and the UK in numbers
- > Life in 1916 Ireland: Stories from statistics
- > Statistical Yearbook of Ireland
- > Measuring Ireland's Progress
- > Women and Men in Ireland
- > Ireland North and South - A Statistical Profile
- > QNHS- Special Modules
- > Other Statistical Publications
- > UN Sustainable Development Goals
- > How Dark is your Sky? Estimating Artificial Light in Ireland from Satellite Imagery, 2015-2019

A-Z of Releases and Publications

- > Access to Finance
- > Agricultural Labour Input
- > Agricultural Price Indices
- > Agriculture Price Indices - Preliminary estimates
- > Annual Services Inquiry
- > Area, Yield & Production of Crops
- > Aviation Statistics
- > **View All...**

Information System for the State

close



Legislative Context

Data Protection legislation (GDPR)

right to privacy

**Openness and
transparency
= Trust**

Freedom of Information legislation

Statistical legislation
EU 223/2009
IE Statistics Act 1993

**right to live
in an informed
society**

Selected sections of Statistics Act (1993)

S.10 Functions of office

S.11 Co-operation and liaison with others

S.13 Independence on statistical matters

S.19 Functions of National Statistics Board (strategic/advisory oversight)

S.20 Officers of Statistics part c covers researchers

S.30 Access to records of public authorities (2)(b) references medical records

S.31 Co-operation of public authorities

Part V Protection of Information

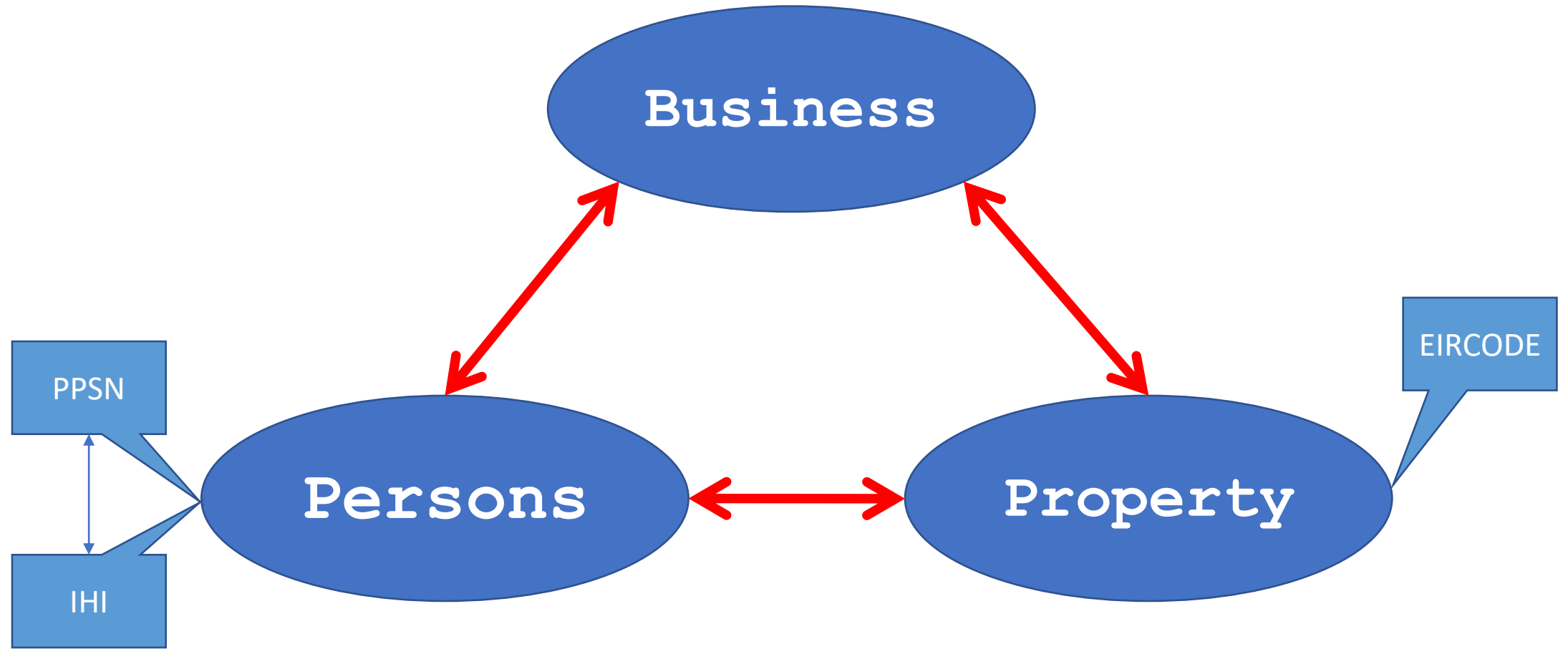
More info at <https://www.nsb.ie/statisticsact/>



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Smarter Data – Better Outcomes



Key : Permanent official identification

National Data Infrastructure (NDI)



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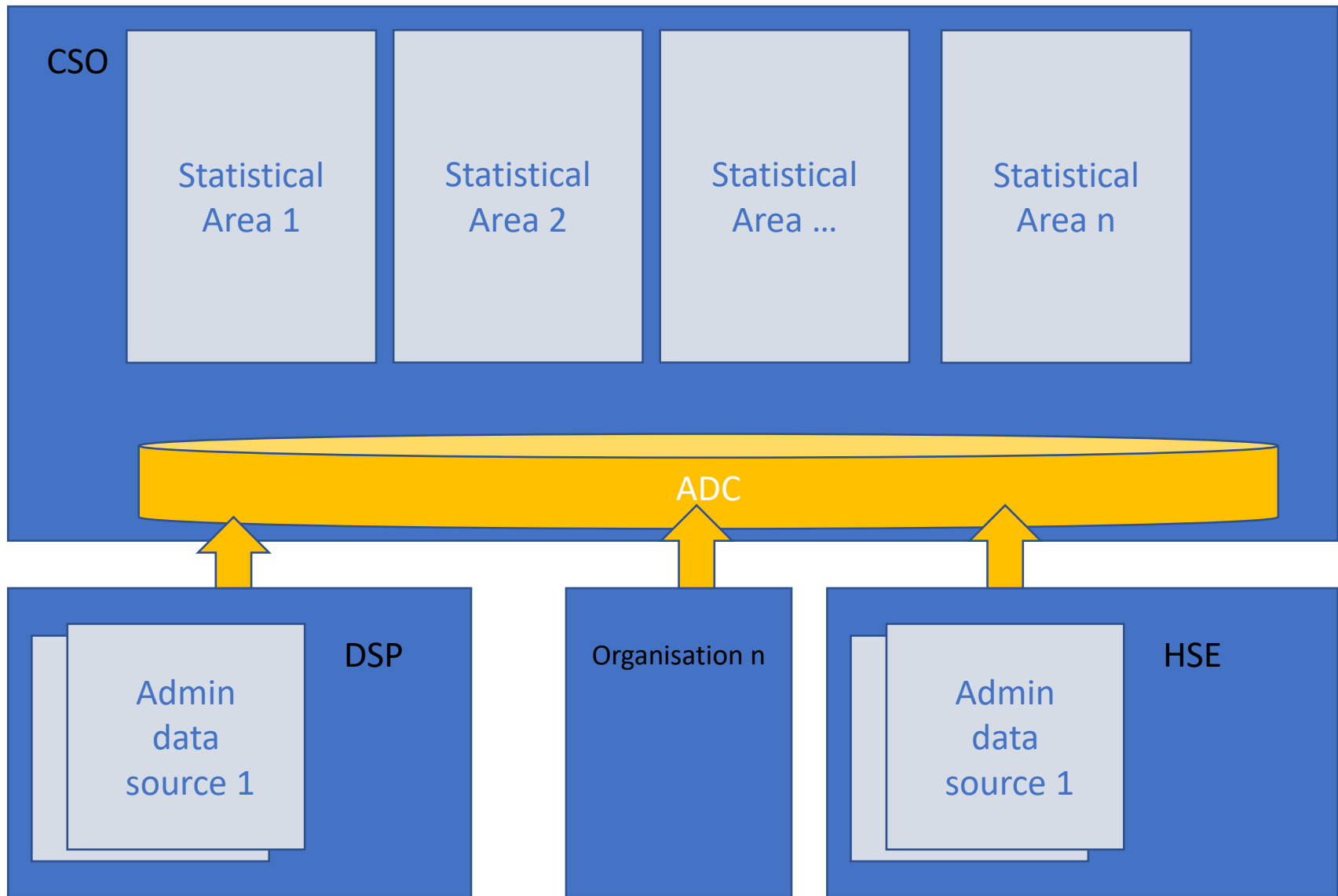
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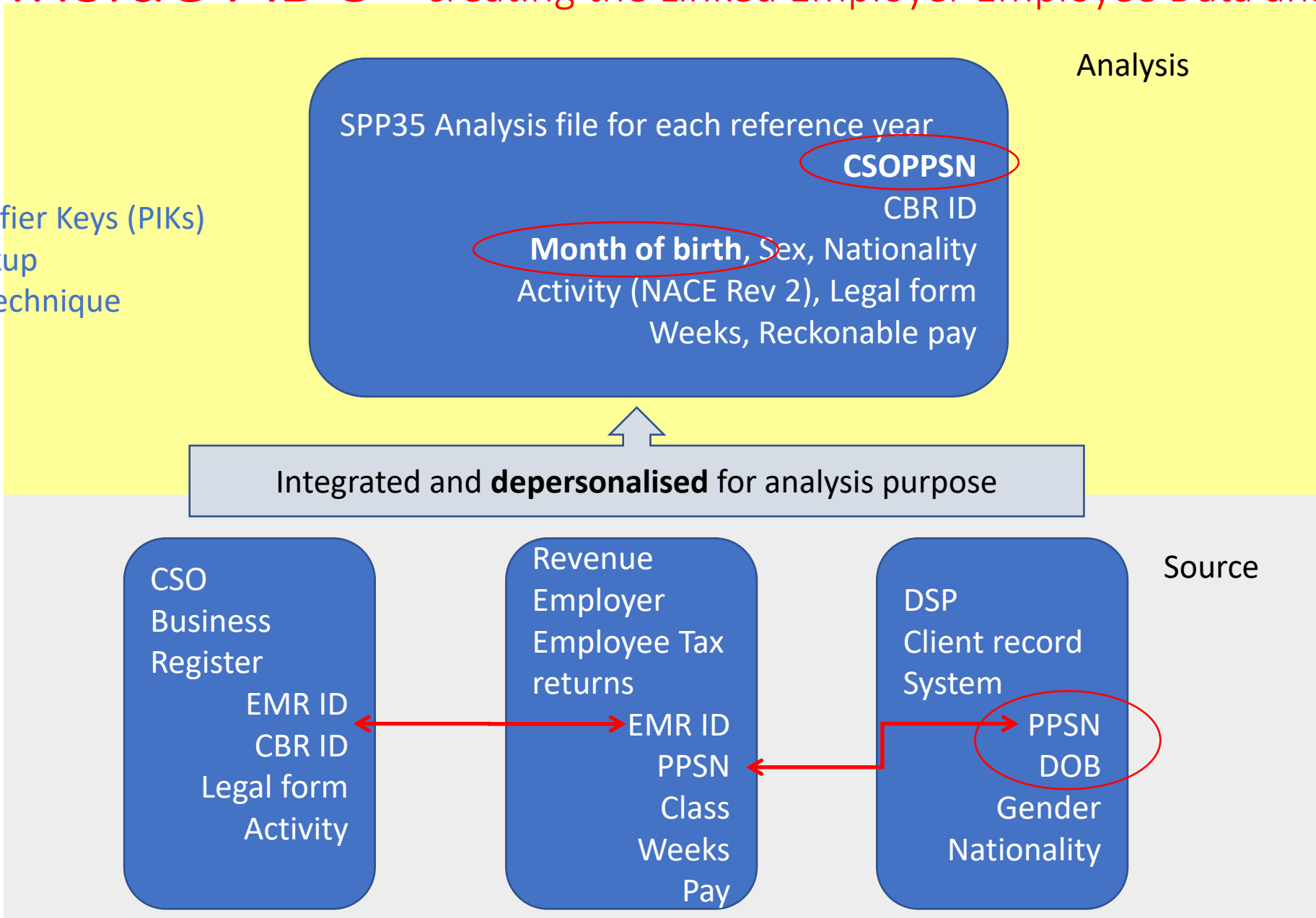
C19 Data Research Hub

ADC Clearing house with safeguards



Inside ADC – creating the Linked Employer Employee Data analysis file

- Protected Identifier Keys (PIKs)
- Random lookup
 - Salt n Hash technique



Analysis

SPP35 Analysis file for each reference year

CSOPPSN

CBR ID

Month of birth, Sex, Nationality
Activity (NACE Rev 2), Legal form
Weeks, Reckonable pay

Integrated and **depersonalised** for analysis purpose

CSO
Business
Register

EMR ID
CBR ID
Legal form
Activity

Revenue
Employer
Employee Tax
returns

EMR ID
PPSN
Class
Weeks
Pay

DSP
Client record
System

PPSN
DOB
Gender
Nationality

Source



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Underpinned by 5 SAFES

- **SAFE Project** – project in public interest and ethically sound, approval process via different management layers with Director General having final sign off (C19 projects include additional steps)
- **SAFE Setting** – remote desktop with restricted functionality (no print or internet) , access restricted to a project folder on secure network
- **SAFE People** – registered bona fide researchers and research organisations that have received induction/training and signed up as Officers of Statistics
- **SAFE Data** – provenance of data, data documentation/metadata, data minimisation including pseudonymisation, note - carries residual risk of indirect disclosure. CSO terminology: RMF (Research Micro File) as opposed to AMF (Anonymised Micro File)
- **SAFE Outputs** – Statistical Disclosure Control (SDC) applied and checked before allowing outputs off site. Outputs are recorded before being allowed offsite.



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Mobilising to inform the national response

Institutional

Collaboration under S11, Stats Act between CSO, DoH, HSE, MU, OSi, UCD, ESRI, UL, NUI Galway on statistical reporting

S30.2(b) Stats Act Permission from the Minister of Health for CSO to collect data from HSE for C19 related statistical analysis and reporting (end of March)

S30 request from DG to HSE to collect data



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Mobilising to inform the national response

Operational (reuse CSO Infrastructure)

Data collected via secure transmission and processed through ADC warehouse source and analysis tiers

RMFs created and made available to nominated 'researchers' under the Statistics Act within current CSO Researcher Infrastructure (C19 Data Research Hub)

5 SAFES apply - Persons, Projects, Data, Setting and Outputs



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Opportunity knocks

=> C19 Data Research Hub

Significant untapped research potential

A little about the data sources (person level)

- Computerised Infectious Disease Record (CIDR)
- Covid Care Tracker (CCT)
- Hospital Inquiry Patient Discharges (HIPE)
- Referrals and test booking (A2I/SwiftQueue)
- Vaccination Information System (VIS) not yet available but planned

Prudent and safe approach to exploiting value

Factor in Health Research regulations

Research Ethics Committee

HRCDC (for Consent declaration)

Also Research Data Governance Board (RDGB) to advise/recommend to CSO

DG has final say per Statistics Act



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Last slide

<https://www.cso.ie/en/aboutus/lgdp/csodatapolicies/dataforresearchers/covid-19dataresearchhub/>

Contact Sanela Smith at C19ResearchInfo@cso.ie

Some acknowledgements - HRB, DoH, HSE, HRCDC

Thank you



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