

How Digital Health helped Israel fight the COVID-19 outbreak ?

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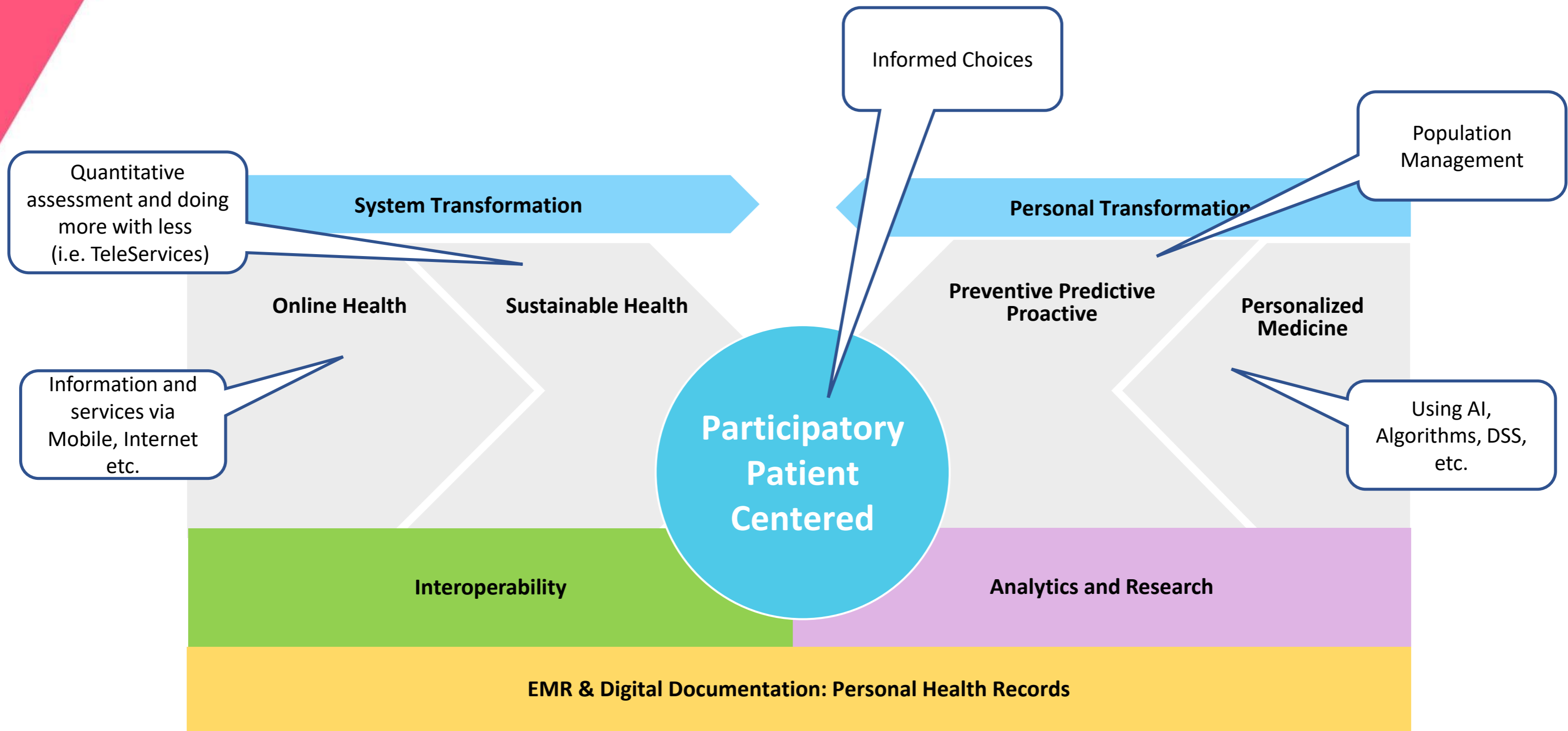
OUR MISSION

Promoting broad and long-standing cooperation between the Israeli Ministry of Health and **partner governments**, and **promoting export** by the Israeli health system through **tri-sectoral collaborations** between government, the health system and the industry, in order to enhance the health system's capabilities, improve it; and to **develop knowledge, research and infrastructure in Israel**



Healthcare
Israel

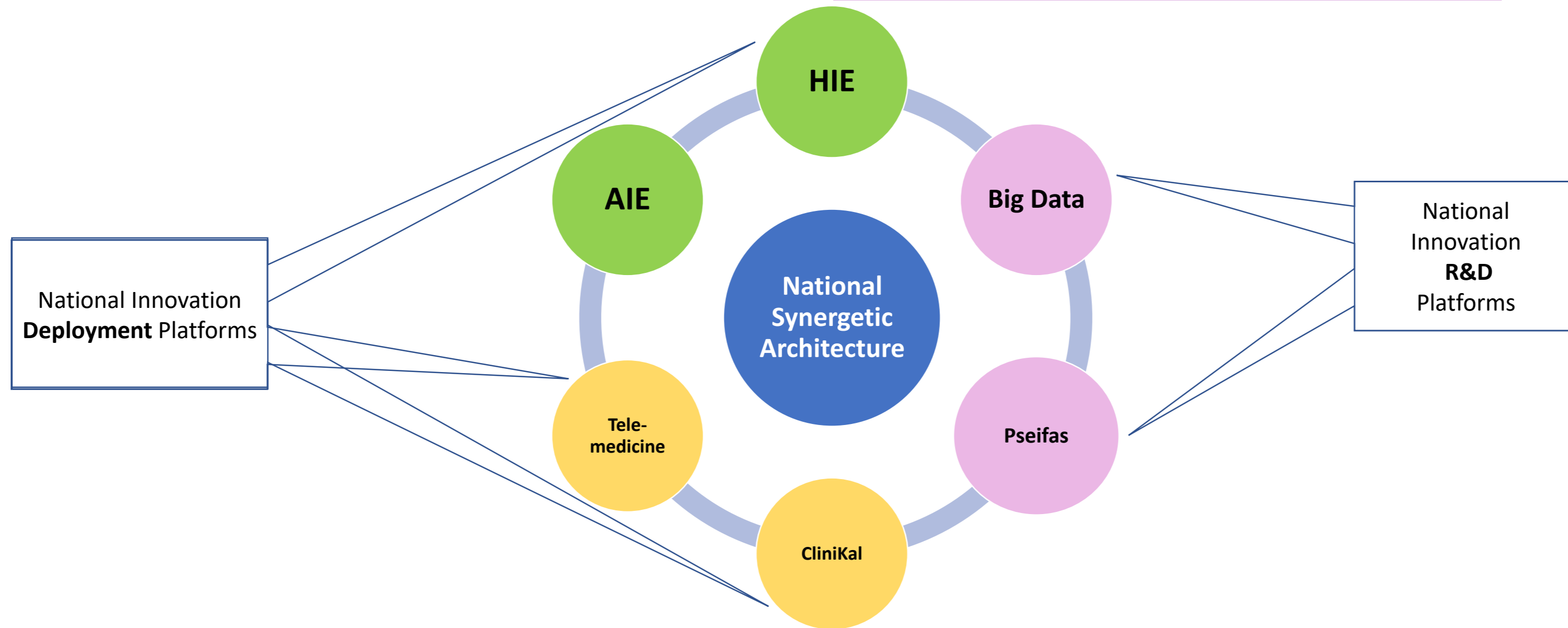
Israel's Digital Health Strategy



Israel's Digital Health Strategy

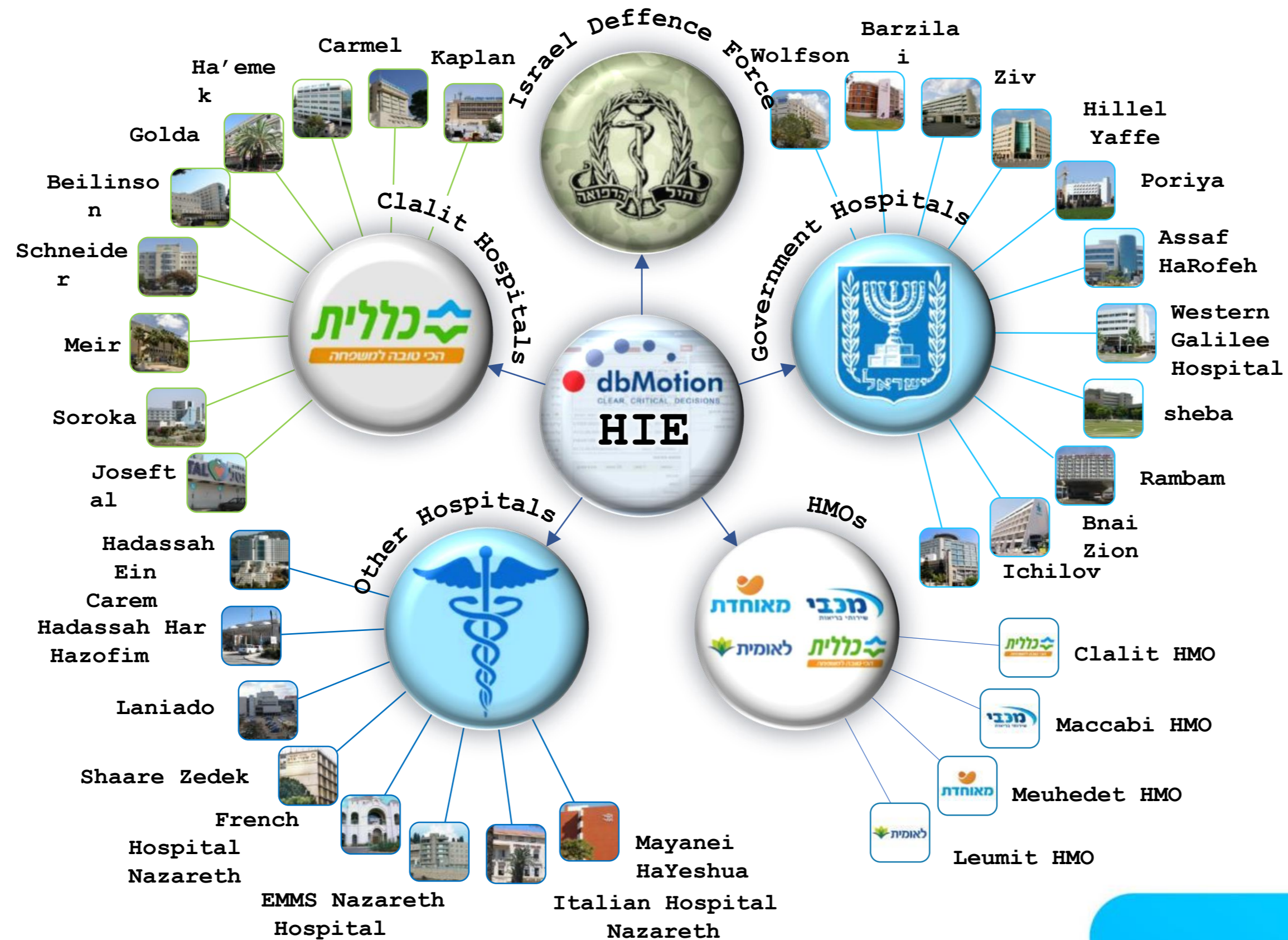
Interoperability

Analytics and Research



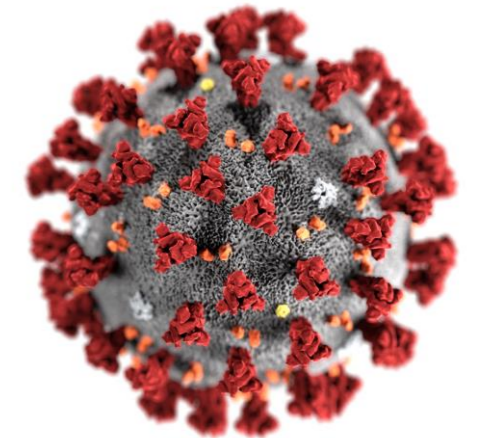
EMR & Digital Documentation: Personal Health Records

Israel's National HIE Network



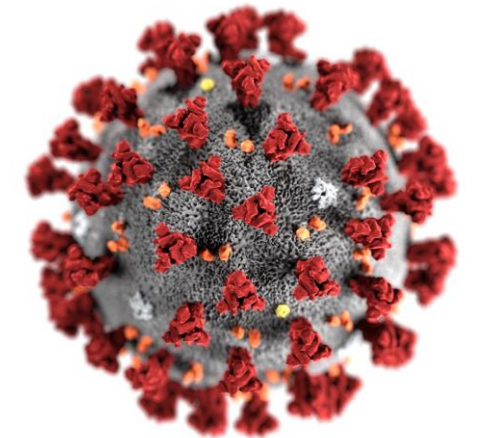
National HIE – During Covid-19

- **Sharing** patient's clinical information between various healthcare providers, including governmental sources, **as a national hub for Covid-19 patients.**
- **Gathering** of clinical information about Covid-19 patients from all healthcare organizations to the MOH's secured central repository **for national analytics, dashboards etc.**



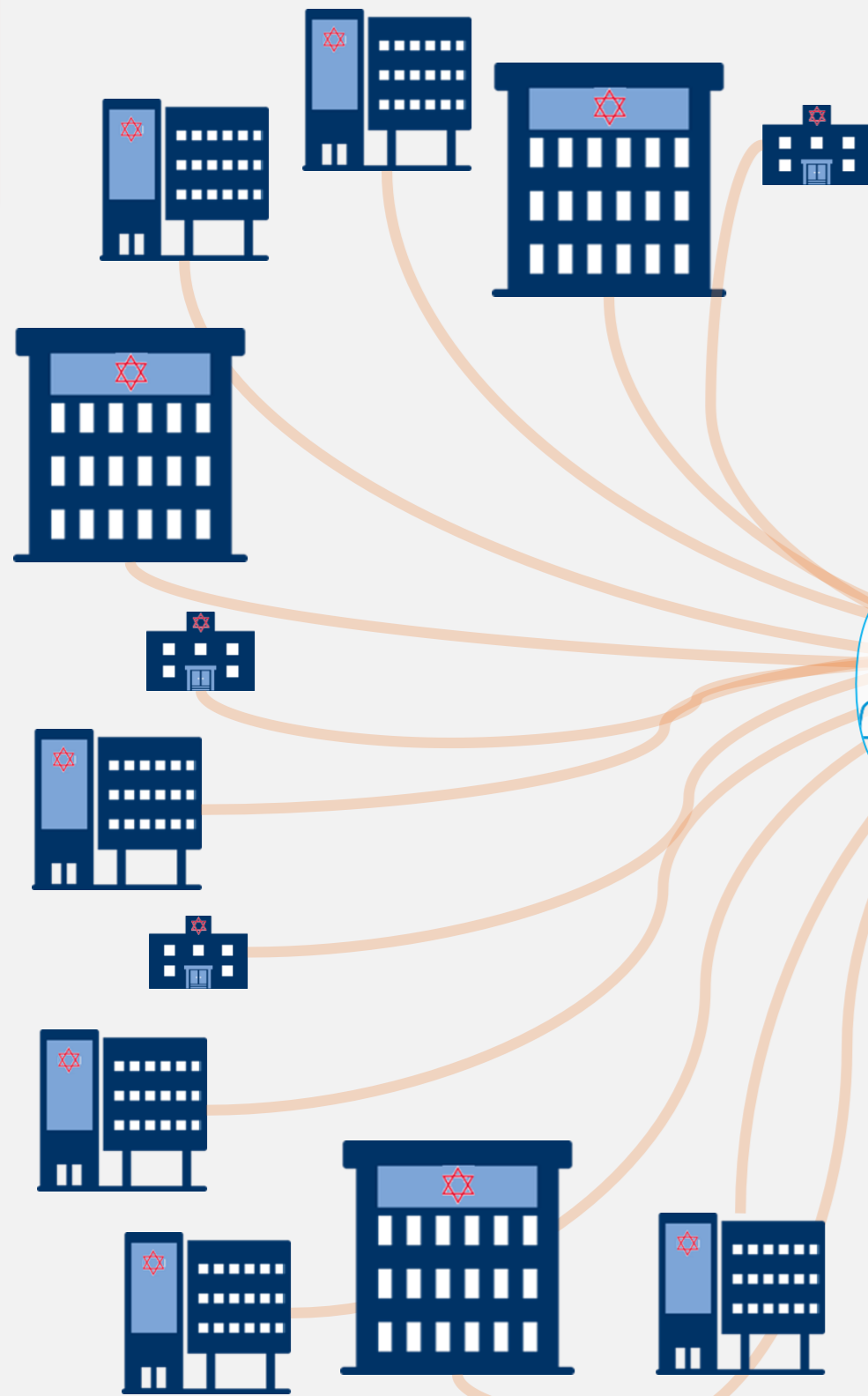
National HIE – During Covid-19

- Allowing the MOH's **epidemiologic investigators** access to the medical history of each and every identified patient, regardless of the providers he visited.
- Enabling **ad-hoc Covid-19 hospitals**, gain access to the full medical history of their newly admitted patients.



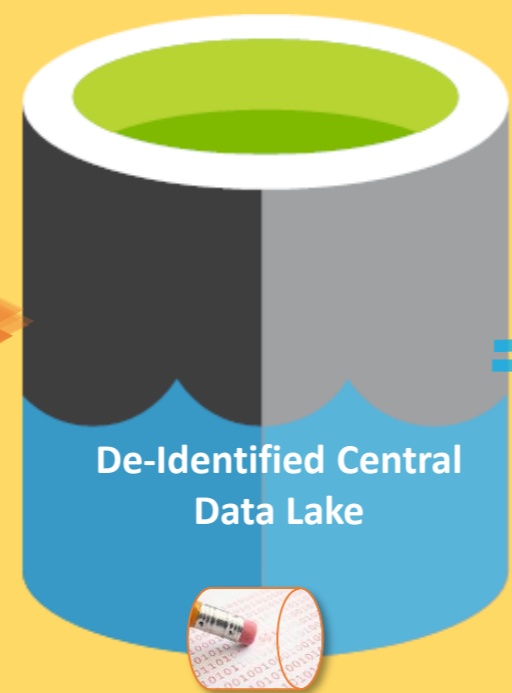
National Big-Data Research Platform

The Israeli Health System



MOH Isolated Domain on Prem

Three levels de-identification mechanism



Big Data Health Research Cloud



Researcher

Health Organization



Government Agencies



Academy

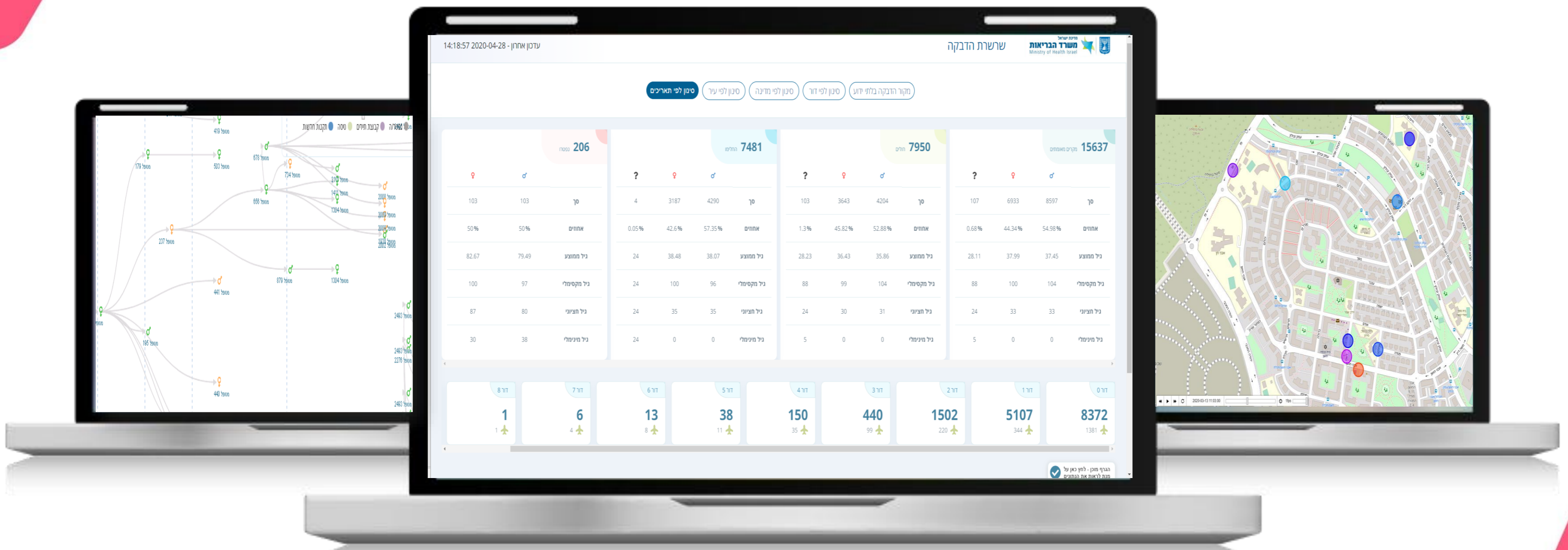


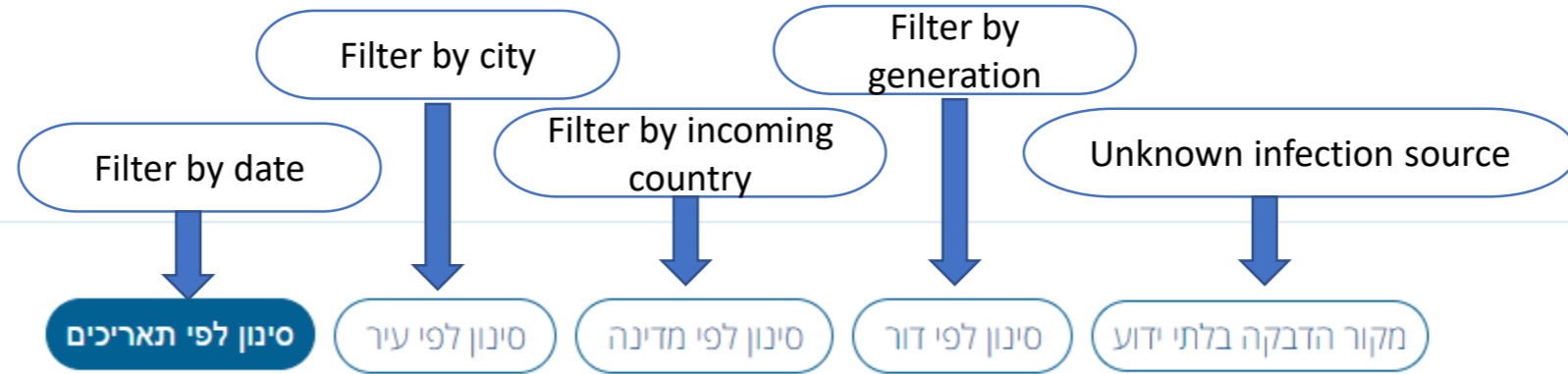
Start Up Companies



Chains of Transmission Analytics

Developed by the Ministry of Health on top of the operational epidemiologic investigation data to assist the Public Health department monitor the outbreak





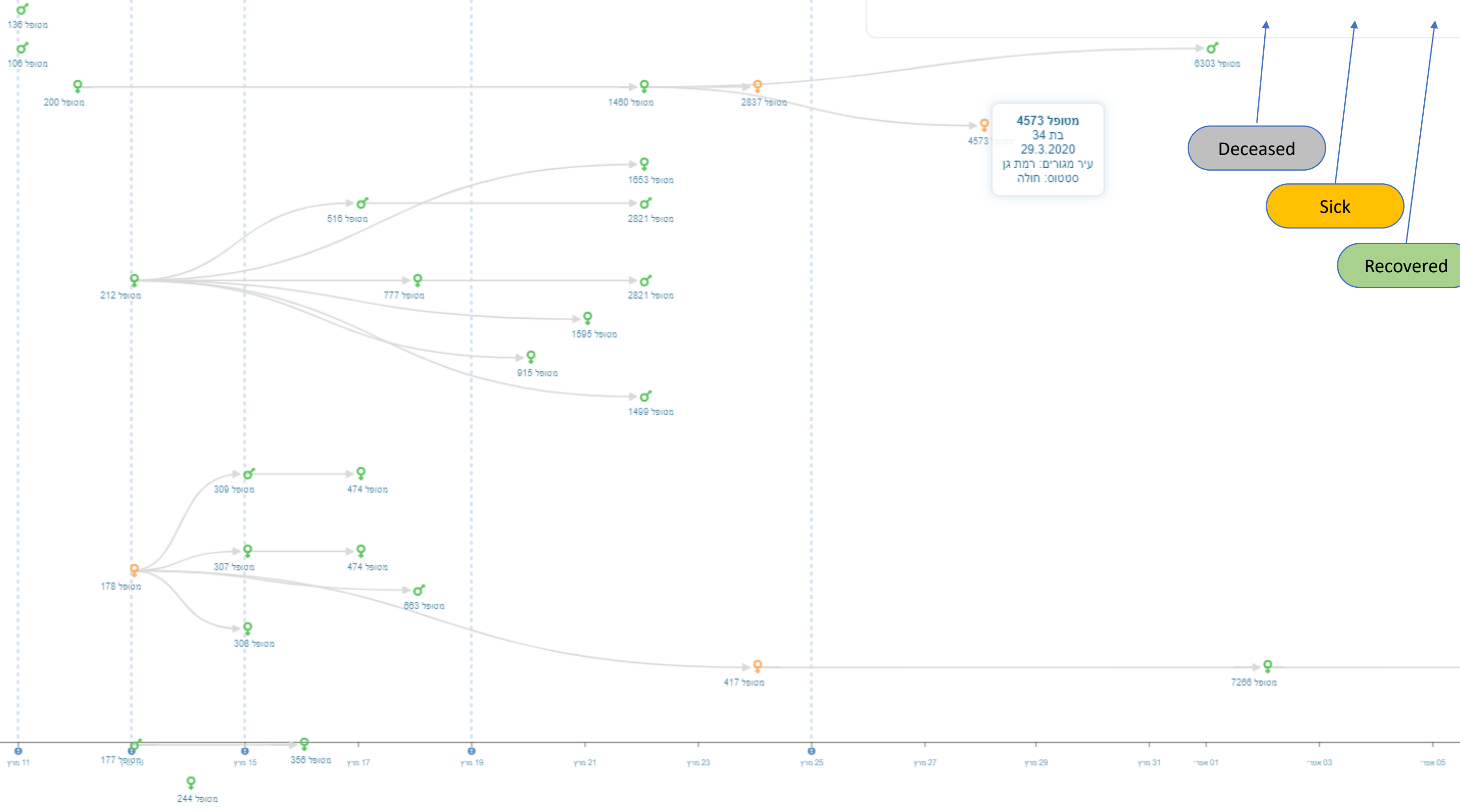
Deceased		Recovered		Currently sick		Total Identified cases					
נפטרו 206		החלימו 7481		חולים 7950		מקרים מאומ 15637					
♀	♂	?	♀	♂	?	♀	♂				
103	103	4	3187	4290	103	6933	8597				
50%	50%	0.05%	42.6%	57.35%	1.3%	44.34%	54.98%				
82.67	79.49	24	38.48	38.07	28.23	37.99	37.45				
100	97	24	100	96	88	100	104				
87	80	24	35	35	24	33	33				
30	38	24	0	0	5	0	0				
סך	אחוזים	גיל ממוצע	גיל מקסימלי	גיל חציוני	גיל מינימלי	סך	אחוזים	גיל ממוצע	גיל מקסימלי	גיל חציוני	גיל מינימלי

Max, Med, Avg, Max Age

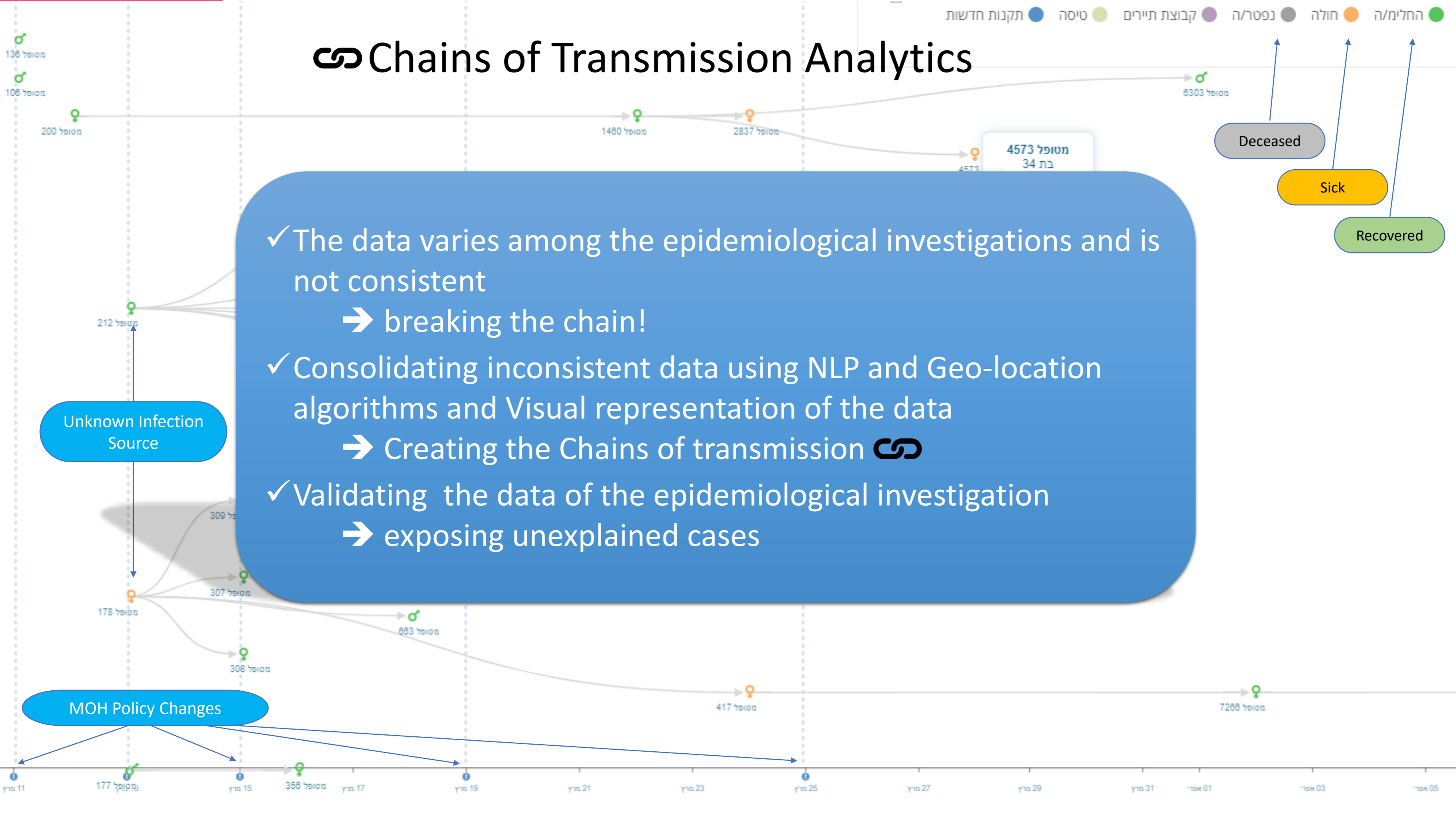
דור 8	דור 7	דור 6	דור 5	דור 4	דור 3	דור 2	דור 1	דור 0
1	6	13	38	150	440	1502	5107	8372
1 ✈️	4 ✈️	8 ✈️	11 ✈️	35 ✈️	99 ✈️	220 ✈️	344 ✈️	1381 ✈️

🔗 Chains of Transmission Analytics

החלימ/ה ● חולה ● נפטרה/ה ● קבוצת תיירים ● טיסה ● תקנות חדשות



🔗 Chains of Transmission Analytics



- ✓ The data varies among the epidemiological investigations and is not consistent
 → breaking the chain!
- ✓ Consolidating inconsistent data using NLP and Geo-location algorithms and Visual representation of the data
 → Creating the Chains of transmission 🔗
- ✓ Validating the data of the epidemiological investigation
 → exposing unexplained cases

Unknown Infection Source

MOH Policy Changes

