



## **WHO, WIPO, WTO Workshop on Innovation in, and Access to, COVID-19 Technologies intellectual property licensing, technology transfer, and sharing of know-how and clinical trial information**

### **Enabling factors and policies for technology transfer**

- ***Introductory overview:  
mapping knowledge creation and knowledge  
flows***

technology transfer:  
a practical craft...

with fundamental policy and  
developmental implications

complexity & dynamism of the  
technology landscape ...

... together with a diversity of  
national needs and circumstances

... necessitates a diversity of  
responses

# Objectives?

TRIPS Agreement articulates why we have an IP system, at least in principle:

*The protection and enforcement of IP rights should*

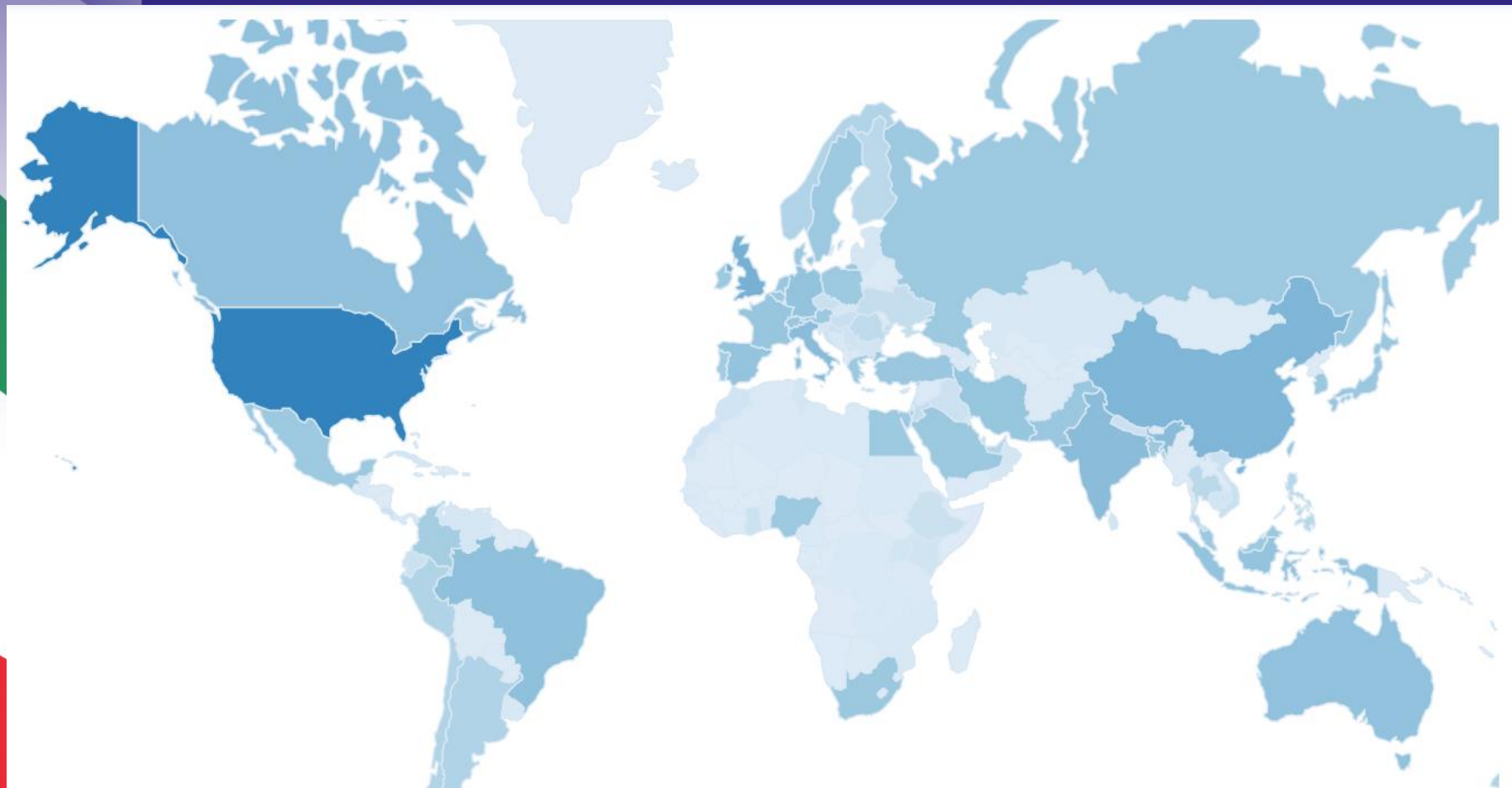
- *contribute to the promotion of technological innovation and to the transfer and dissemination of technology,*
- *to the mutual advantage of producers and users of technological knowledge and*
- *in a manner conducive to social and economic welfare, and*
- *to a balance of rights and obligations.*

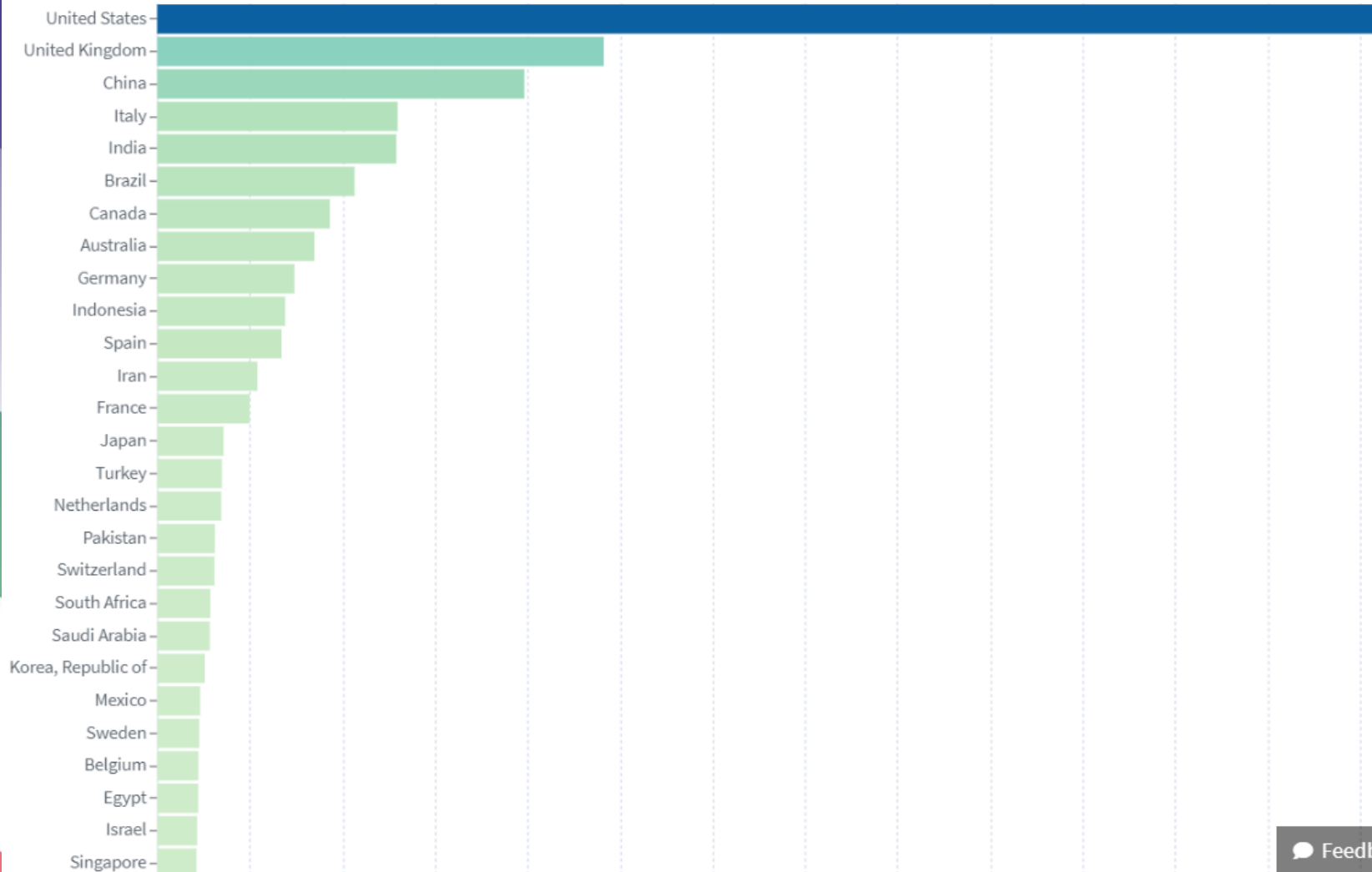
But how to make this work in practice? That's the essence of linking practice with policy goals...

## Notes

1. No single, authoritative definitive repository of all data relevant to COVID
2. Active work on several fronts to gather and compile data, and to improve its accuracy, coverage and timeliness – a continuously dynamic picture which will progressively improve
3. Inevitable caveats and limitations apply to these data - currently based on surveys of publicly available information and reports
4. Only intended as a general background
5. Further activities to develop more precise and complete information

# Published scholarly research on COVID vaccines 2020-2021

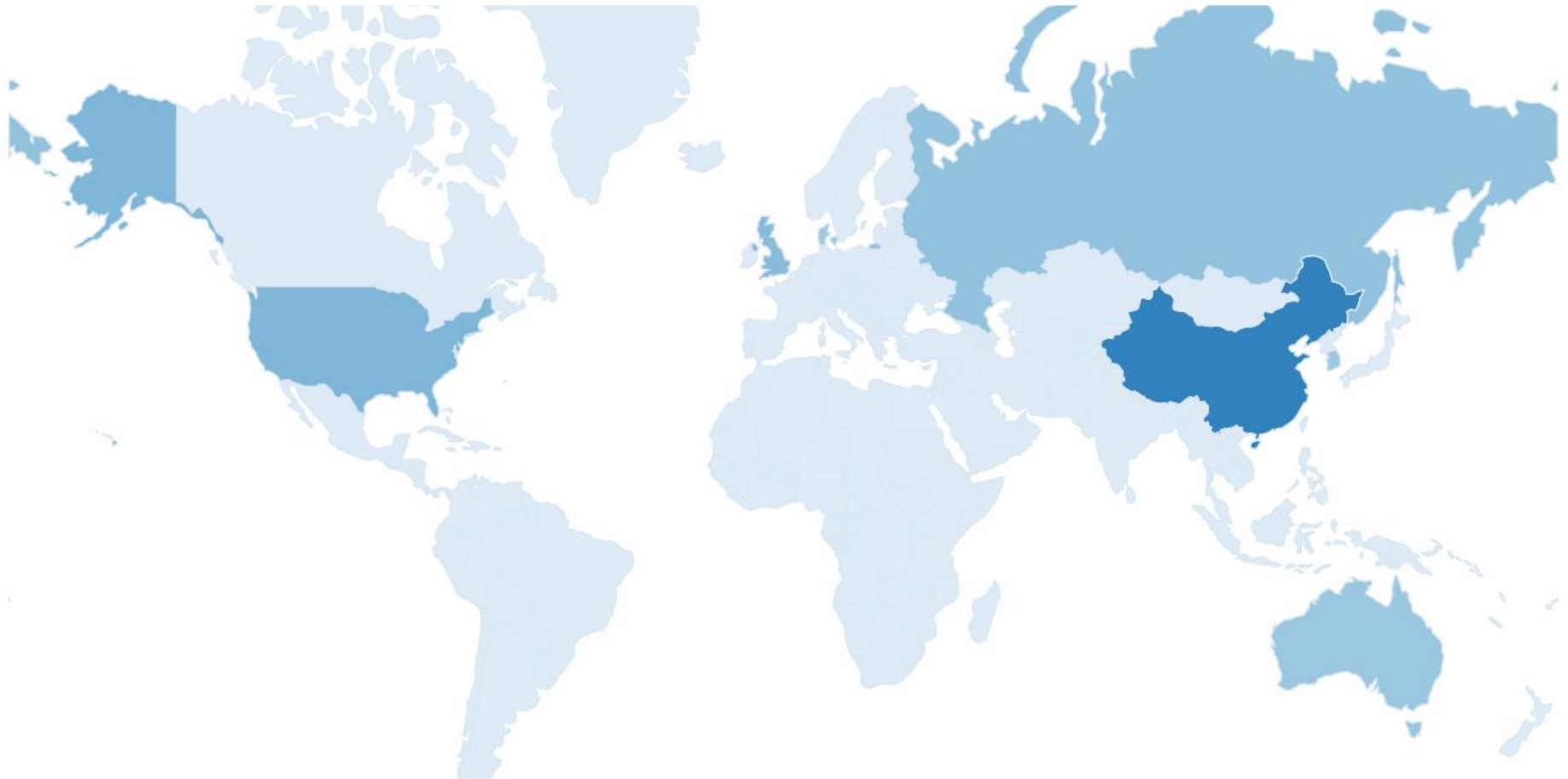




Feedback

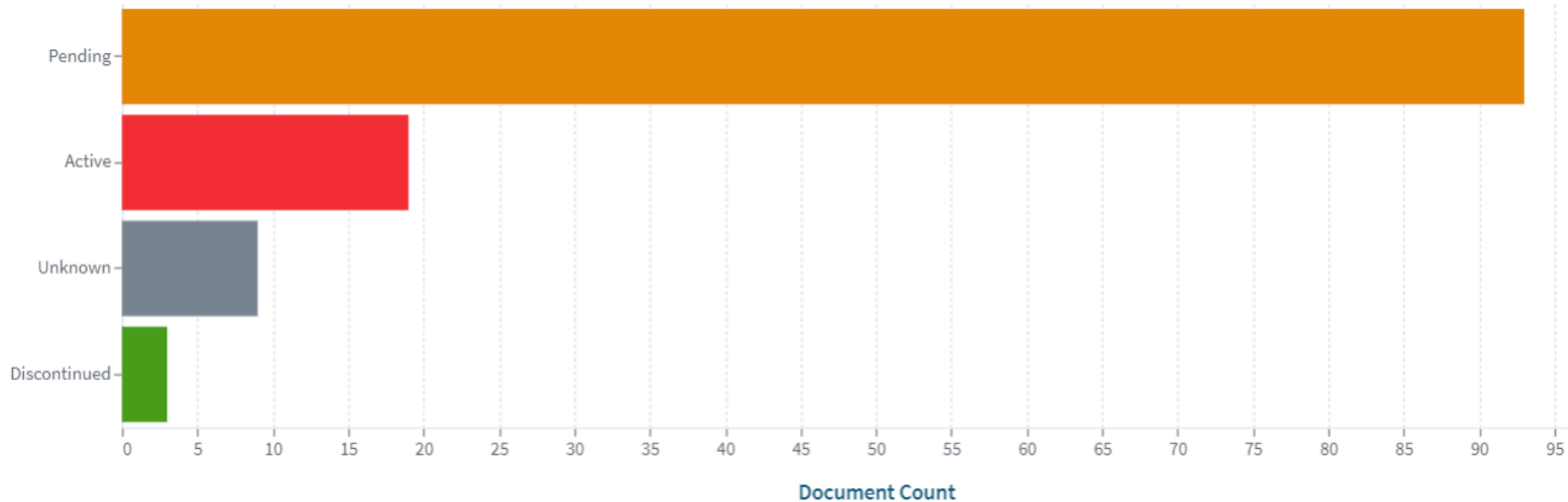


# general patenting activity citing COVID and vaccination

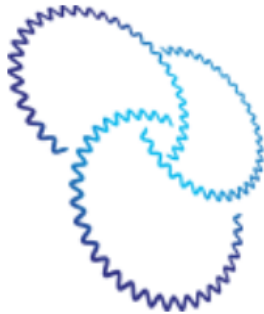


# Patents mostly pending for specific COVID-related inventions

Patent documents by Legal Status







medicines  
patent  
pool



WORLD TRADE  
ORGANIZATION

WHO WE ARE

WHAT WE DO

PRO

[vaxpal@medicinespatentpool.org](mailto:vaxpal@medicinespatentpool.org)

Licensing for Public  
Health

Strategy

Prioritising Medicines for

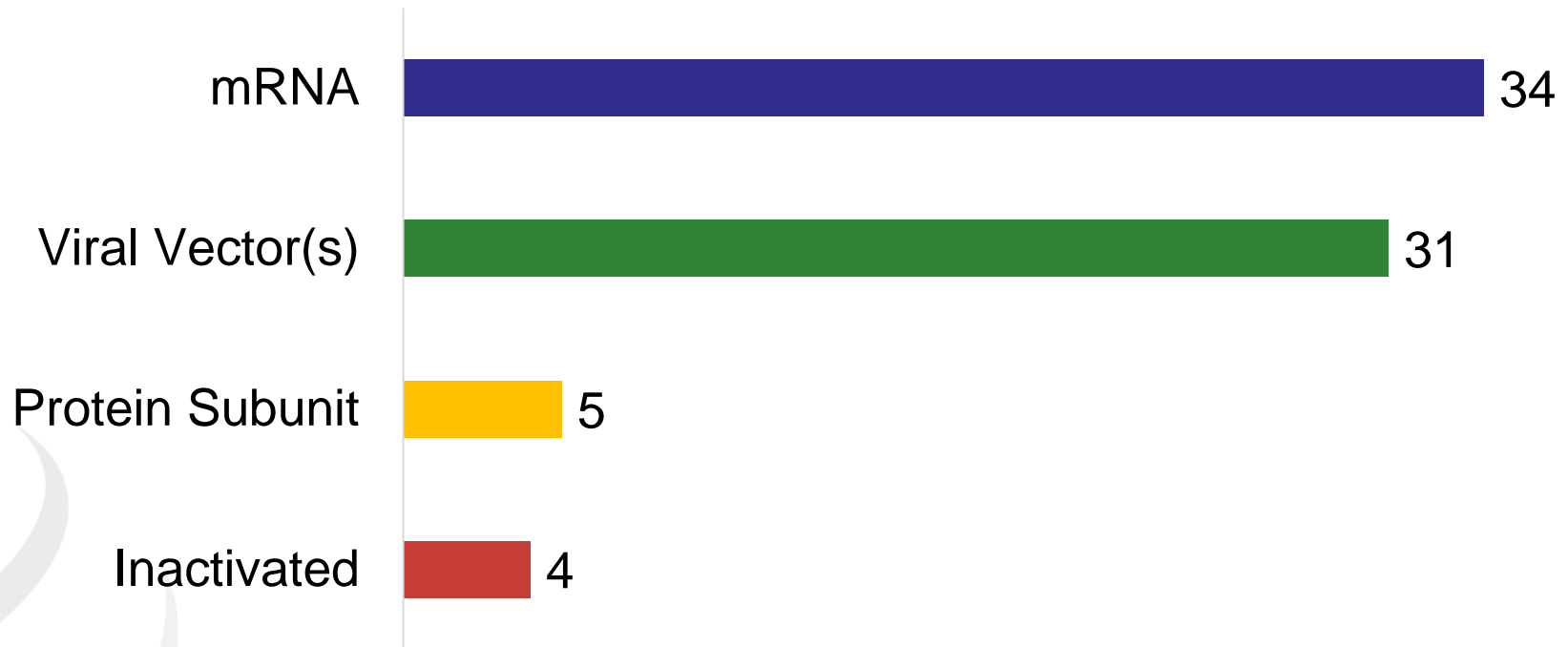
Disease  
Areas

Download the database by clicking below:

# VaxPaL

COVID-19 VACCINES PATENT LANDSCAPE

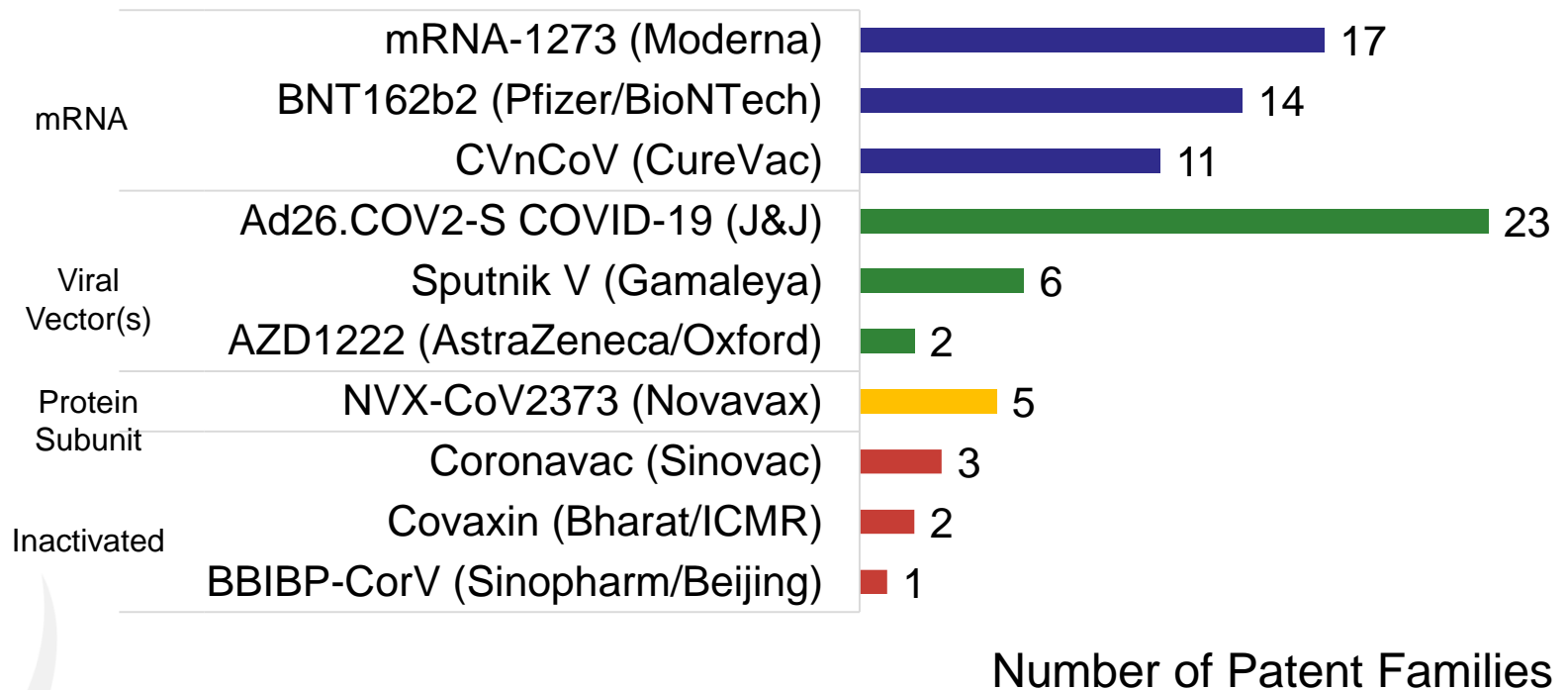
# Patent families according to vaccine technologies



Number of Patent Families

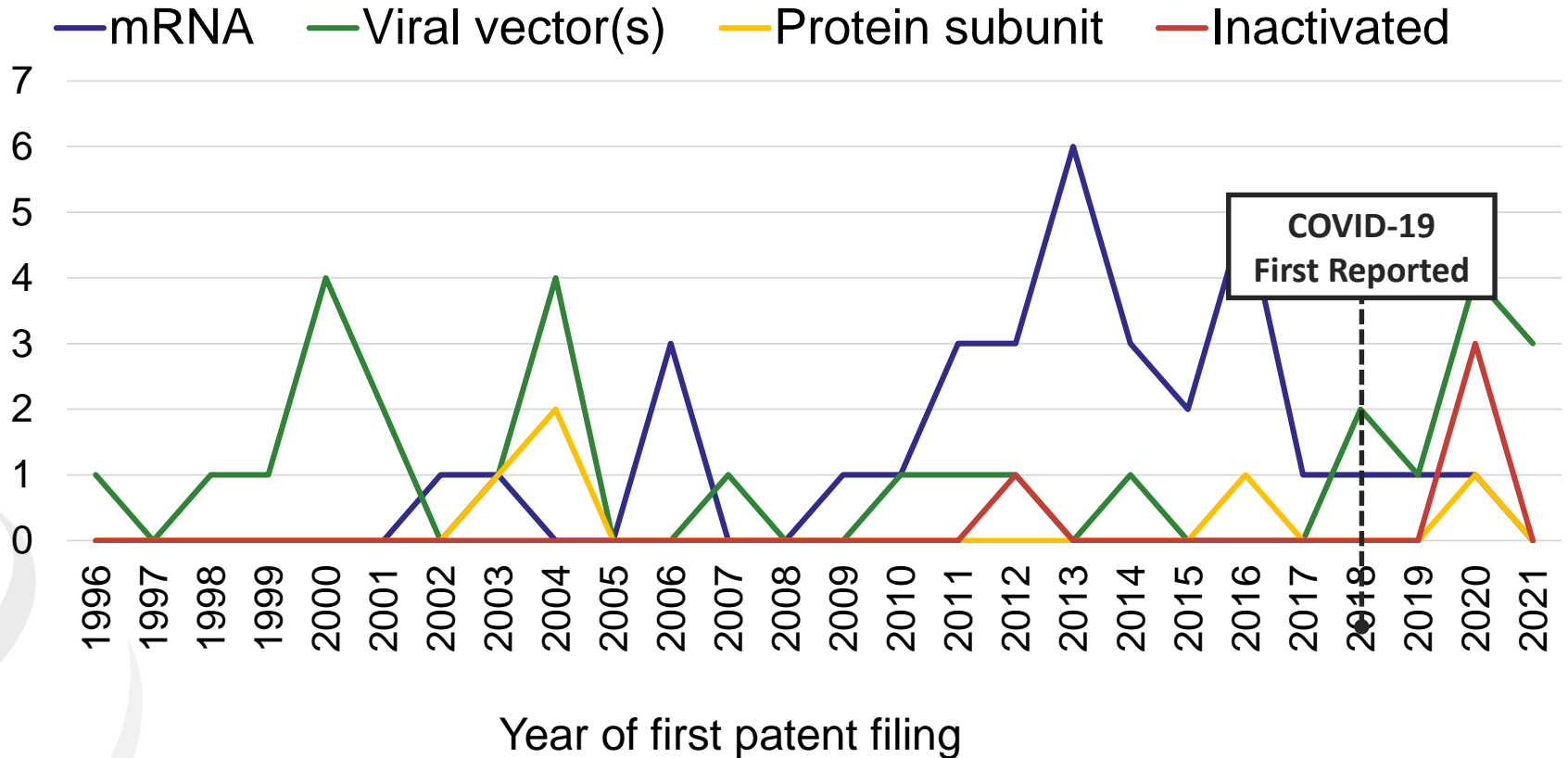
Source: VaxPal, WTO Analysis – Wu, Chiang

# Vaccine and Technology Platforms



Source: VaxPal, WTO Analysis – Wu, Chiang

# Patent families\* over time



\*: same subject matter across different jurisdictions  
Source: VaxPal, WTO Analysis – Wu, Chiang<sup>11</sup>



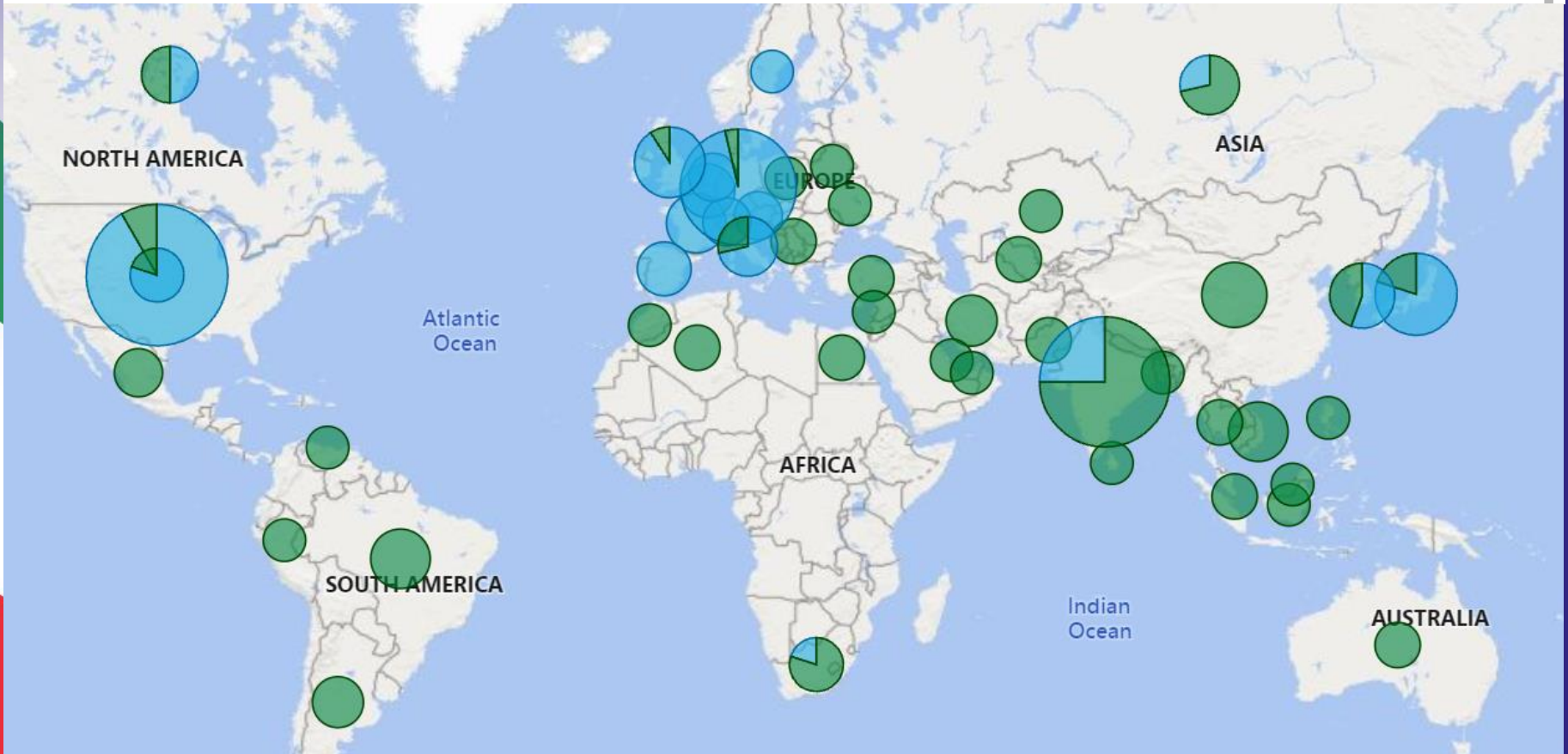
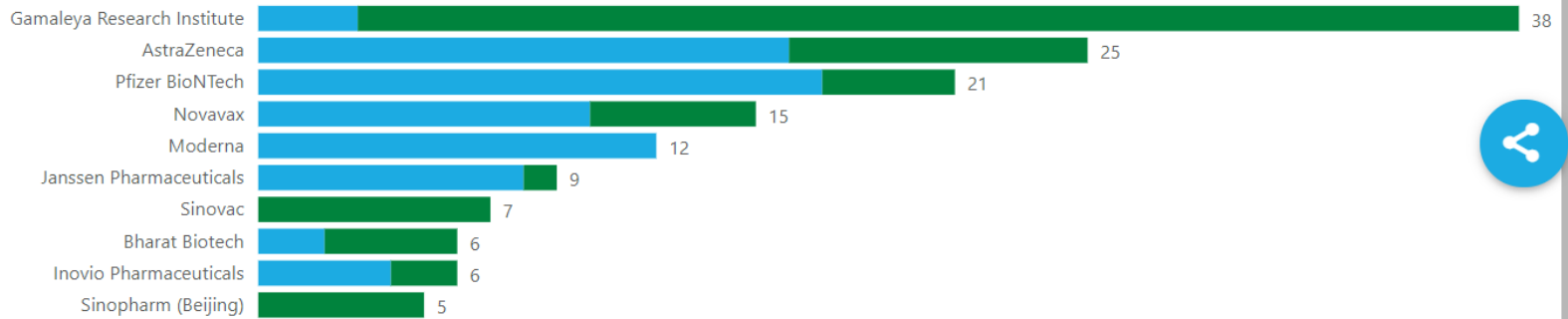
 Statistics

## COVID-19 Vaccine Market Dashboard

*An interactive tool for partners, manufacturers, and countries to follow the developments of the COVID-19 vaccine market with up-to-date information.*

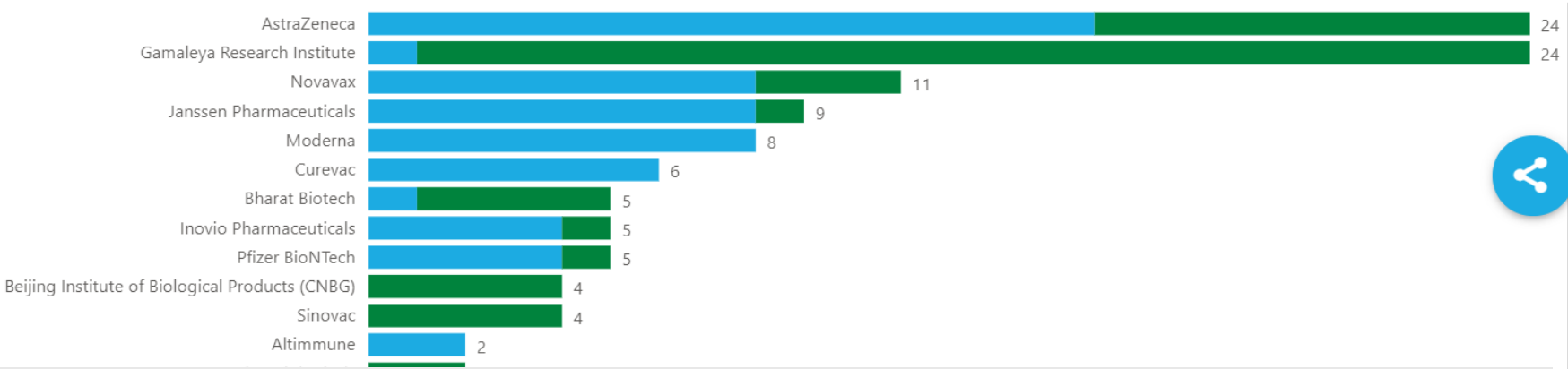
UNICEF

Type ● CDMO ● Technology Transfer

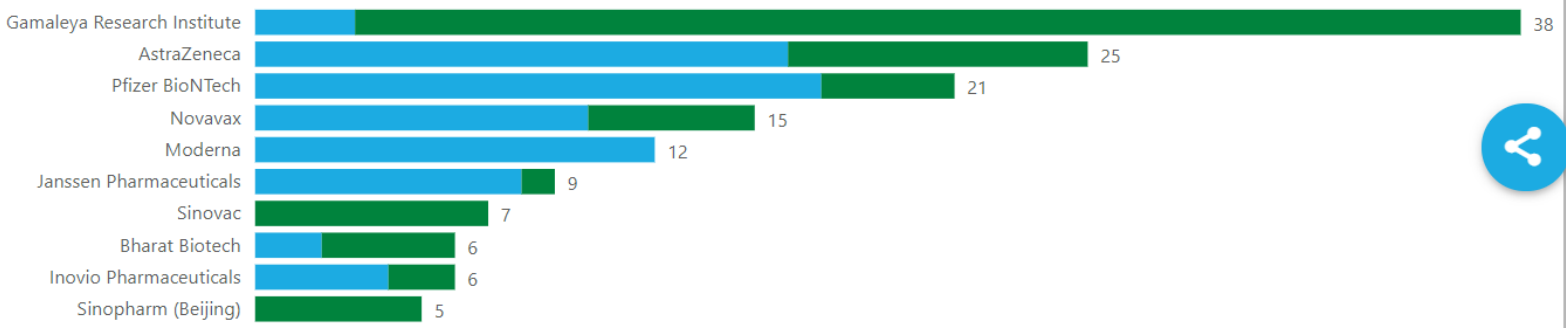


Reported contract production (blue); production through technology transfer (green)  
Source: UNICEF dashboard

Type ● CDMO ● Technology Transfer

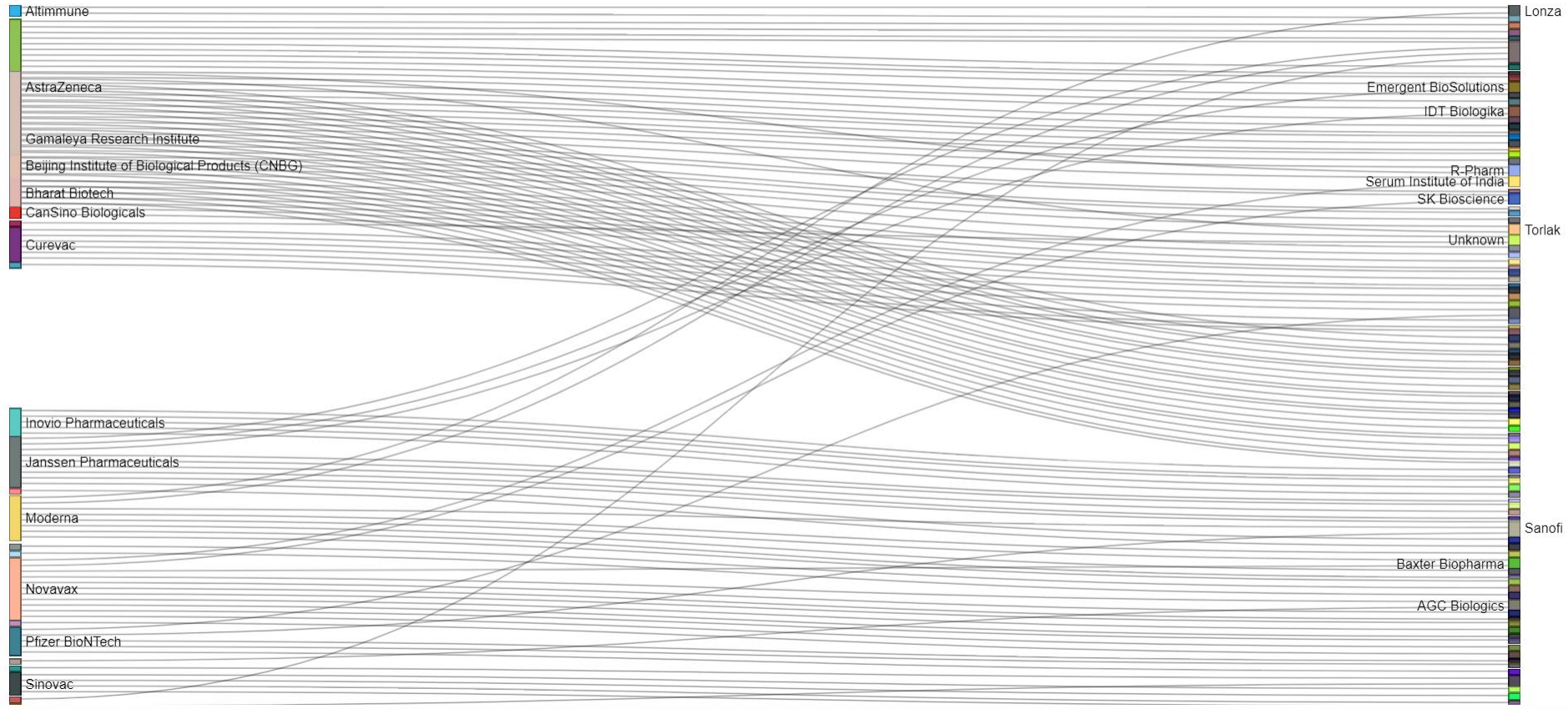


Type ● CDMO ● Technology Transfer



A dynamic situation:  
 reported licence deals for COVID vaccine production: June  
 2021 data vs September 2021 data  
 Source: UNICEF dashboard

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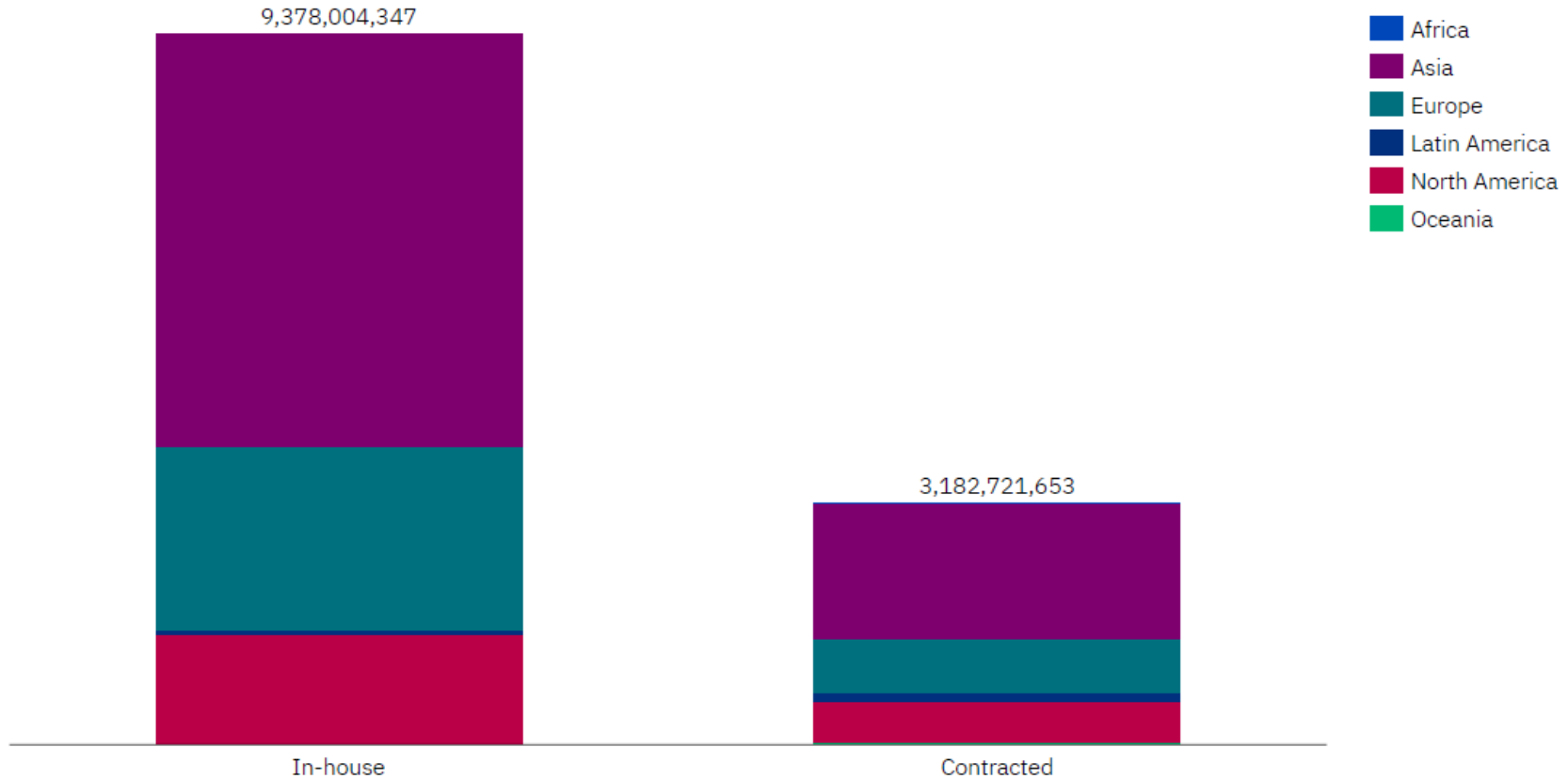


Source: UNESCO COVID Dashboard



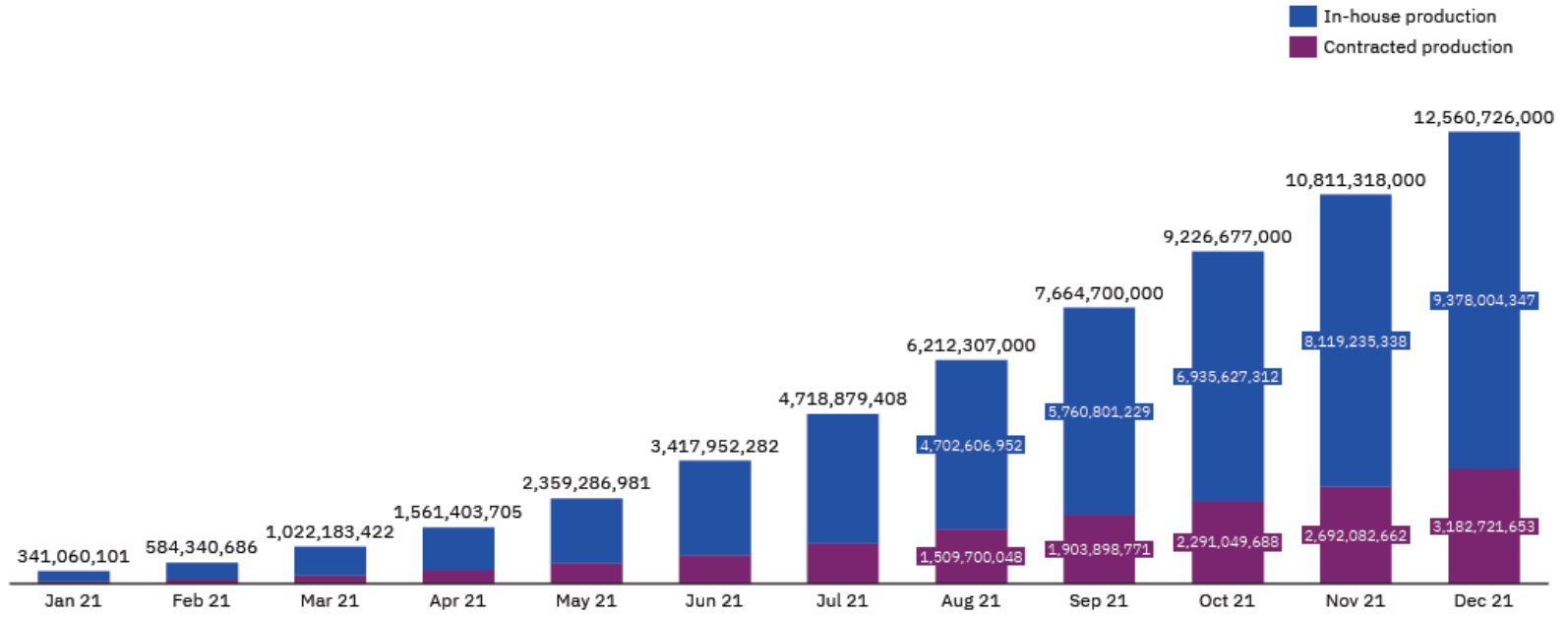
# Asia, Europe and North America are producing more in-house than contracted, other continents vice versa

Airfinity forecasted production of in-house vs. contracted manufacturing split by continent

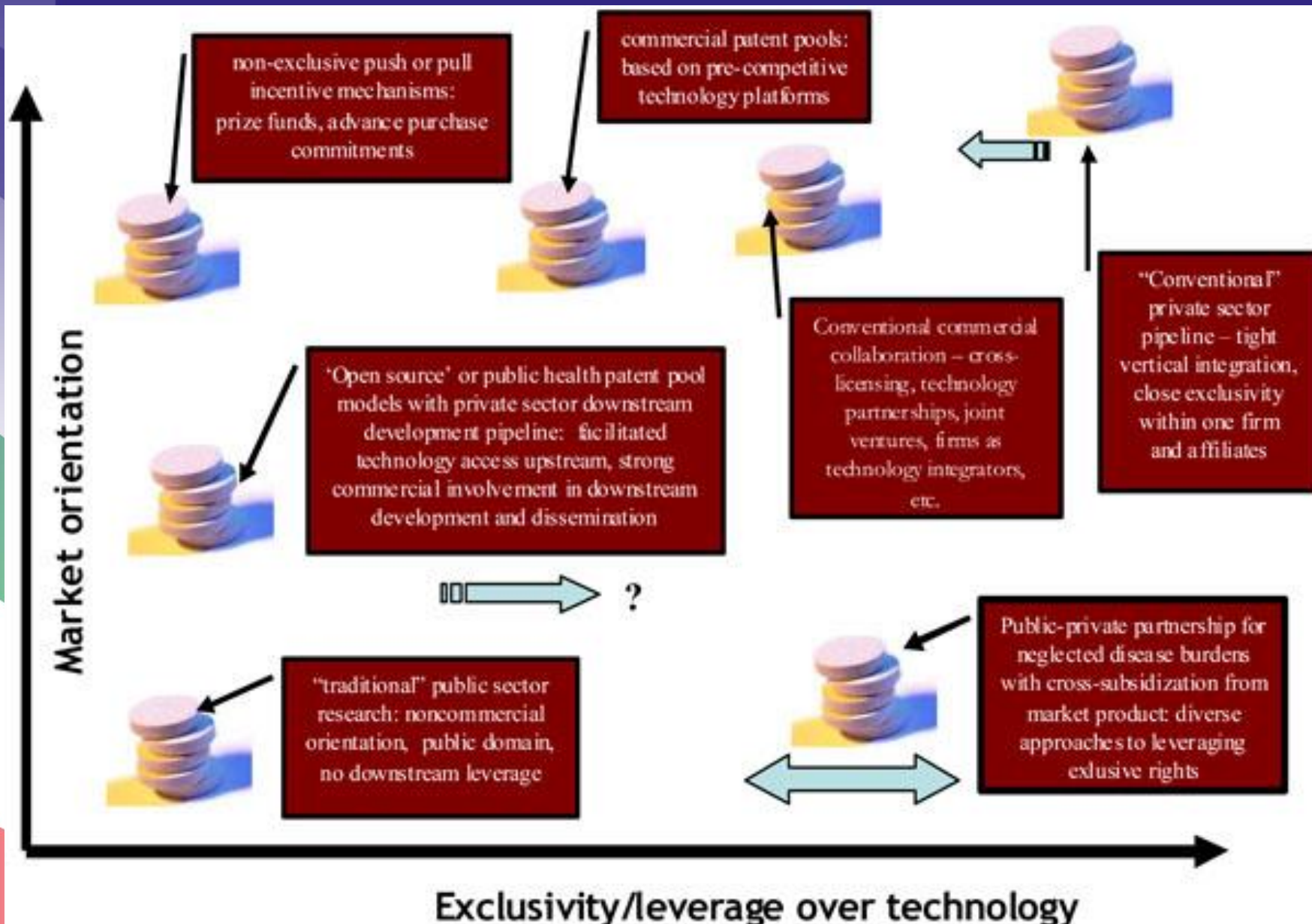


# Share of contracted production rising steadily as production increases over 2021

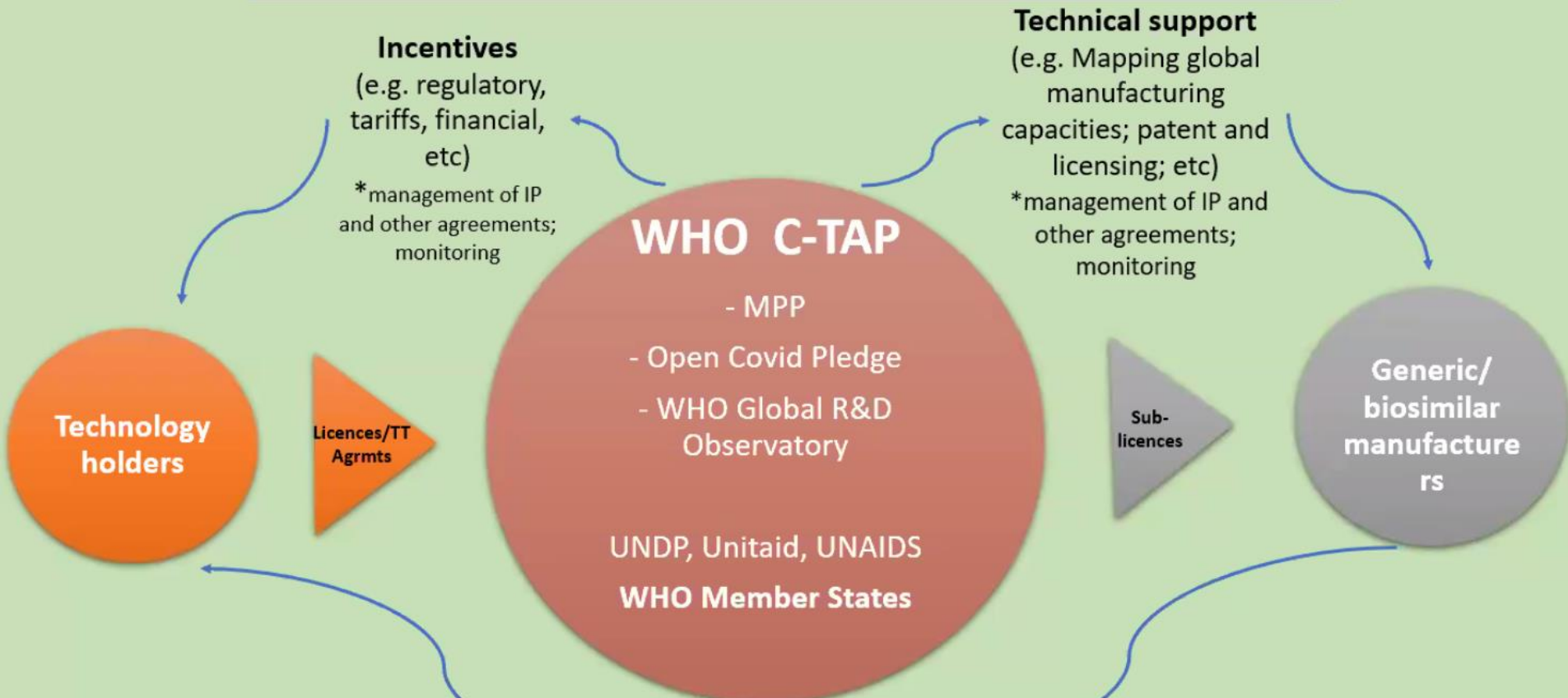
Forecasted supply of vaccines split by contract or own sites



% in-house production	81%	79%	78%	76%	76%	77%	76%	76%	75%	75%	75%	75%
% contracted production	19%	21%	22%	24%	24%	23%	24%	24%	25%	25%	25%	25%



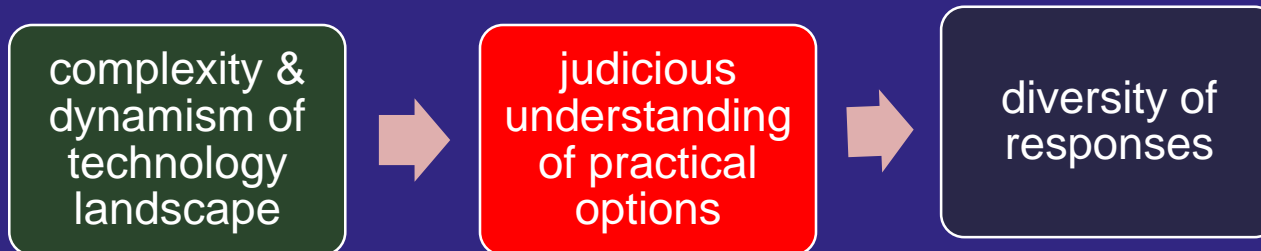
How C-TAP works to facilitate technology sharing and increase scale up?



## IP related access initiatives for COVID-19 response

	TRIPS Waiver proposal	TRIPS flexibilities/ Compulsory licenses	Access oriented voluntary licenses/ WHO C-TAP	Traditional bilateral voluntary licenses
IP coverage	-Covers not only all patents related to a product but other IP rights like trade secrets, copyrights, industrial designs, undisclosed information. -Neither grant nor enforce existing patents	Patents: Product by product and country by country	Patents: - Public-health driven, non-exclusive and transparent licenses - Product by product for several countries through patent pooling mechanisms (e.g. MPP) - Multiple manufacturers	Patents: - Bilaterals (lack of transparency – deals among companies) - Exclusive-licenses or limited to few manufacturers - Other potential contractual restrictions
Other market exclusivities	Depends on the implementation at the national level (Waivers could be included)	Depends on the implementation at the national level (waivers could be included in the text of the CL)	Waivers to data exclusivity protection generally included in the licenses	Unknown (Should be included by the company)
Duration	Pandemic	Duration of the patent (Can be less according to the legislation)	Pandemic or pandemic +	Pandemic or pandemic +
Scope	All WTO Members (Implemented at the National level)	Each country should grant it	Broad coverage, usually including most LICs and lower-MICs (difficult to include certain Upper MICs with manufacturing capacity)	Country by country (or small number of countries in some cases)
Legal certainty to operate for manufacturers	Fast and high during the pandemic. Unknown after the pandemic.	-Fast and high during and after the pandemic -Needs political willingness to do it	Negotiations may take time (However it can be done to multiple manufacturers with WHO's technical support LP, tech transfer hubs, etc)	Negotiations may take time
Technology transfer	-Not included. -Reverse engineering possible. - Tech transfer collaboration could take place among manufacturers	- Not included -Reverse engineering possible. - Tech transfer collaboration could take place among manufacturers	Included and supported by WHO C-TAP initiative and implementing partners	Included
Transparency	Yes	Yes	Yes	No
Freedom to operate need?	No (All the patents even the unknown patents are included, no need of deep	No (If all related patents to a specific product are covered by the CL)	Yes (According to the geographical scope of the license)	Yes

reframing this complexity & dynamism  
as a gateway to diversity of responses



# reframing complexity & dynamism of technology as a gateway to diversity of responses

