

living planet symposium

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TAKING THE PULSE
OF OUR PLANET FROM SPACE



NEWSPACE AS A PARADIGM SHIFT

Prof. W. Peeters

Bonn, 26 may 2022

Comparing Traditional Space with New Space

Characteristic	Traditional Space	New Space
Main Driver	Hardware Production	Software Application
Orientation	Techno-push	Application oriented
Design characteristics	High reliability and redundancy	Simple design, shorter lifetimes
Design philosophy	Customized	Standardization
Engineering	High Quality, High cost	Low-cost, low mass
Launch	Dedicated launcher	Shared launch
Intellectual Property	Patent protection	Technological advantage
Risk aspects	Risk Adverse	Accept business risks
Internal Organization	Hierarchical	Matrix
Financing	Company funds, debt financing	Equity financing

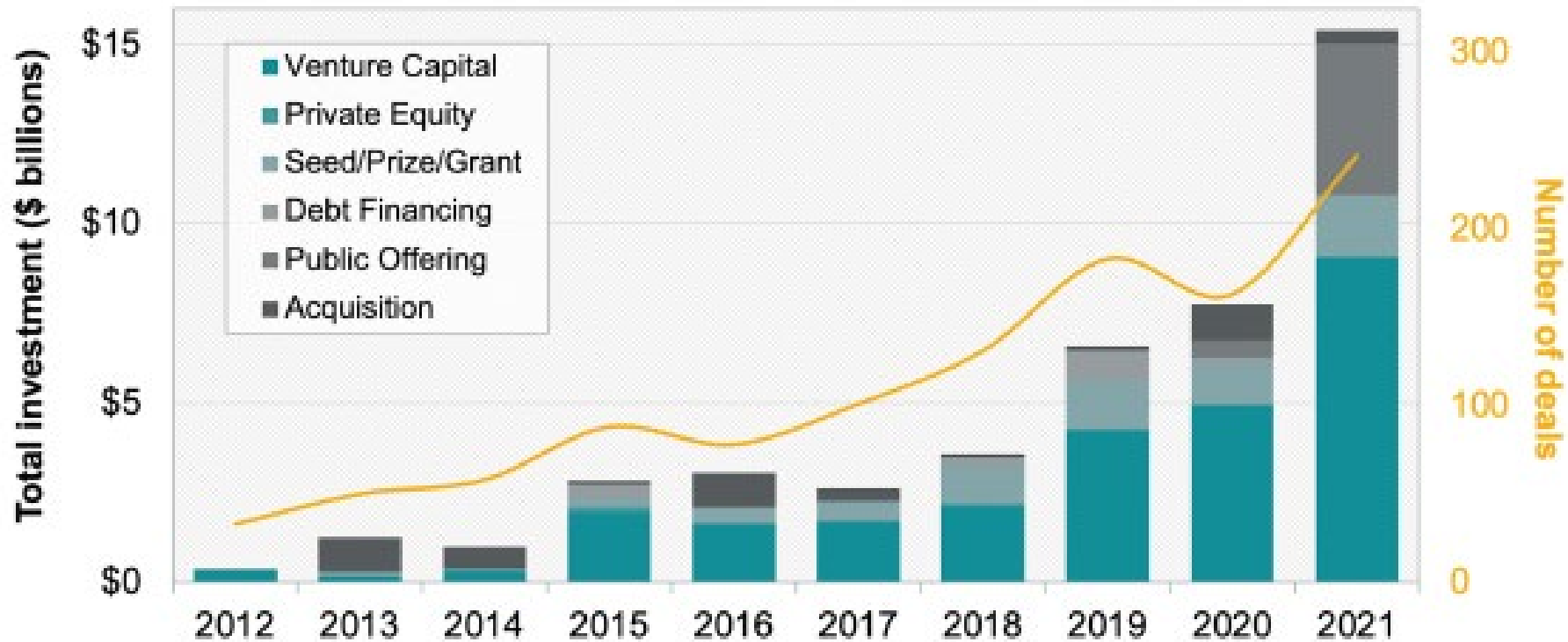


*Private companies which act
independent of governmental space
policies and funding, targeting
equity funding and promoting
affordable access to space and novel
space applications*

Peeters, W. *New Space* Vol 6(3) (2018), pp. 187-190.

Trend is fueled by increasing equity financing

Investment in Start-Up Space Companies 2012 to 2021, by Investment Type



Source : Bryce (2022)



Large commercial space companies have high overhead costs



The design philosophy (company culture) is adapted towards large satellites



They need a higher Return On Investment in view of the higher overheads

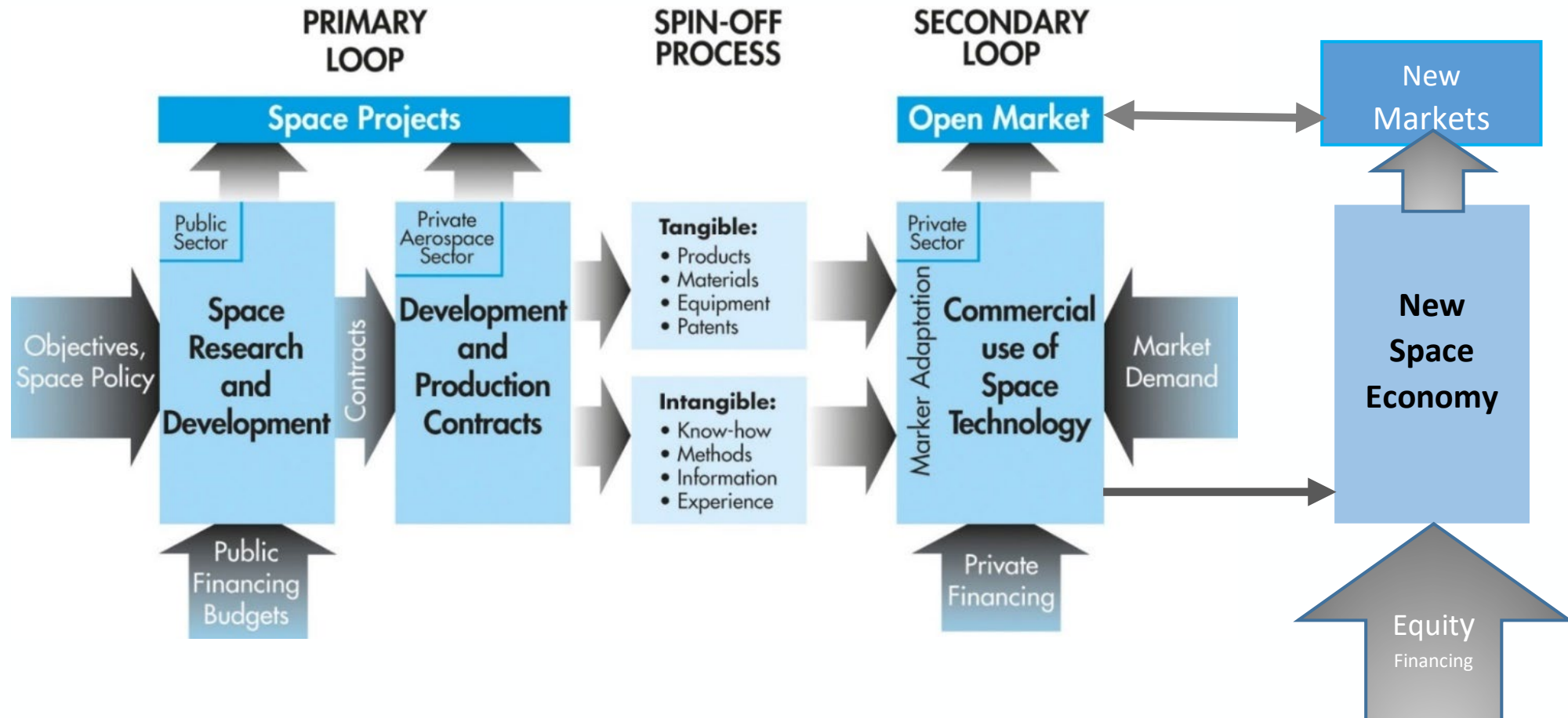


They need large markets to reach their goals



Therefore, are less competitive in niche markets

Three Waves of space activities



Phase 1: Government driven space economy

1950 – 1970

Phase 2: Commercial space

1970 – now

Phase 3: New Space

2000 - present

Will NewSpace lead to full democratization of Space, affordable to all countries?