

## Twitter Thread by Benaam Niveshak



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**Before discussing this company let us first understand the meaning and basic difference between some words which are often used interchangeably.**

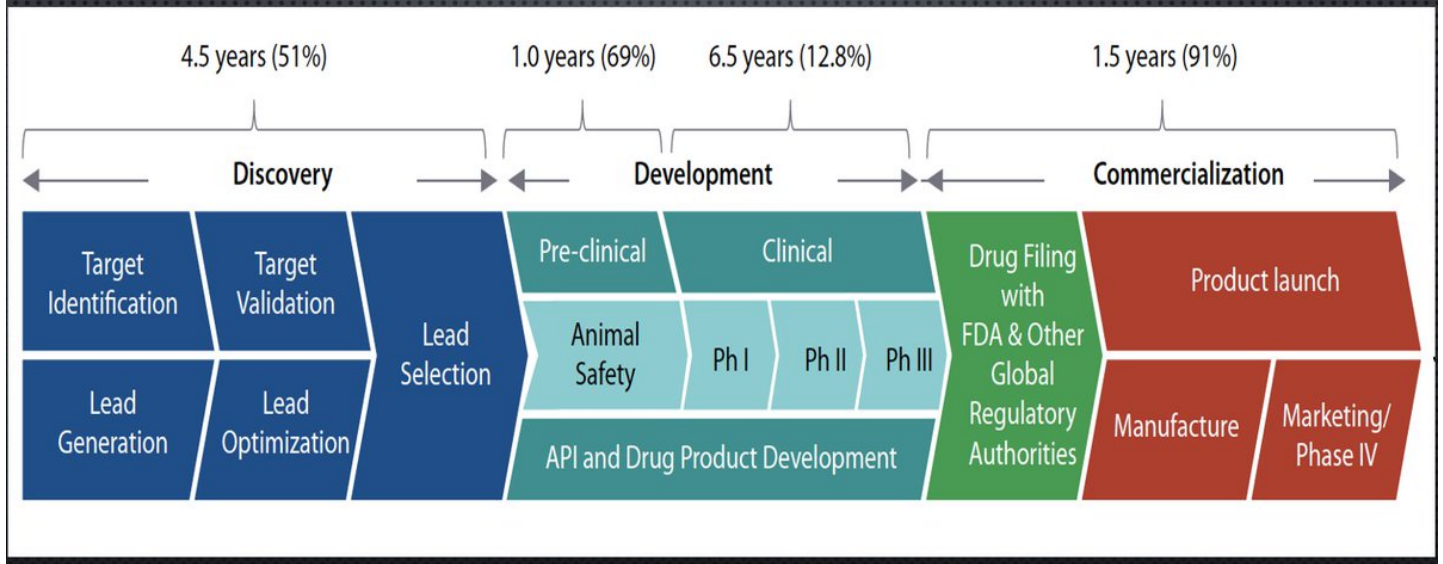
### WHAT IS CRO, CDMO, CMO OR CRAMS?

- INNOVATOR OR A SPONSOR COMPANY OUTSOURCE SOME OF THEIR KEY FUNCTIONS TO A THIRD PARTY FOR EITHER RESEARCH OF A MOLECULE OR DEVELOPING THE DRUG OR MANUFACTURING API/FORMULATION. PLAYERS PROVIDING OUTSOURCING SERVICES TO INNOVATOR/SPONSOR COMPANY ARE REFERRED TO AS A CRO, CDMO, CMO OR CRAMS PLAYER.
- TO KEEP IT SIMPLE WE CAN SAY
  - CRO = OUTSOURCING OF RESEARCH
  - CDMO = OUTSOURCING OF DEVELOPMENT + MANUFACTURING
  - CRAMS = OUTSOURCING OF RESEARCH + DEVELOPMENT + MANUFACTURING
  - CMO = OUTSOURCING OF MANUFACTURING

The need of such players arises as the R&D process to bring a product into market is expensive and time consuming.

On an average the R&D in pharma takes 14years with US\$2.6Bn to bring a product to market with an overall success rate of ~4.1%

# THE R&D LIFECYCLE

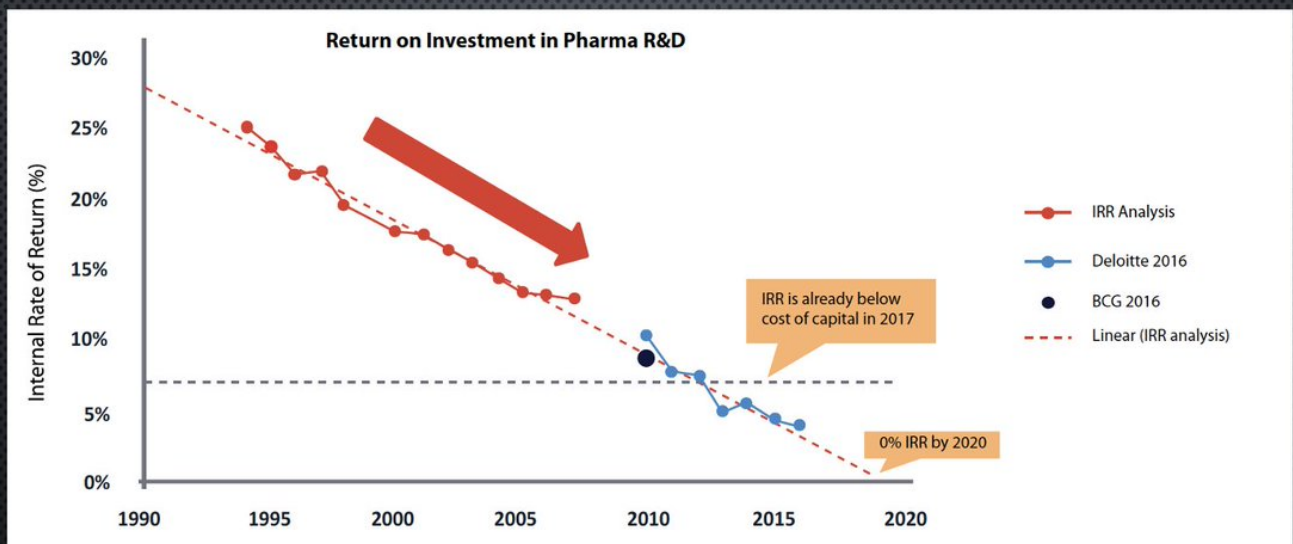


Even after investing substantial time and money, pharma companies are facing sustainability crisis due to dwindling ROI on R&D

Pharma companies invest around 15-20% of their revenues in R&D but in return the IIR < Cost of capital.

In 2020 it was expected to touch 0%

## WHY OUTSOURCING OVER IN-HOUSE R&D?



<https://t.co/w1a9jNTpME>



## LEVERS FOR OUTSOURCING

- R&D REQUIRES HUGE CAPEX AND TIME WITH LOW SUCCESS RATE. WITH THE HELP OF THESE PLAYERS THE INNOVATOR COMPANY MINIMISE INVESTMENTS IN CAPITAL-INTENSIVE IN-HOUSE FACILITIES AND CONVERT FIXED R&D EXPENDITURES INTO VARIABLE COSTS, THEREBY ENABLING THEM TO BALANCE INVESTMENT RISK.
- RESOURCE FACTOR: THEY GET ACCESS TO SUPERIOR TECHNOLOGY AND INFRASTRUCTURE. APART FROM ACCESS TO PHYSICAL ASSET THEY HAVE SUPPORT OF LARGE TALENT POOL AND EXPERIENCED R&D LEADERSHIP
- SMALL & MEDIUM SIZE COMPANIES, VIRTUAL BIOTECH COMPANIES CAN CONVERT THEIR IDEAS INTO REALITY WITHOUT LARGE INVESTMENTS. THE RAPID GROWTH OF VIRTUAL BIOTECH COMPANIES HAS ALSO INCREASED THE DEMAND FOR CONTRACT SERVICES AS THESE COMPANIES FIND IT CHALLENGING TO SET UP THE REQUIRED CAPABILITIES IN-HOUSE OR CANNOT AFFORD IT ON A FULL-TIME BASIS.
- REDUCTION IN TIME TO MARKET FOR A DRUG THEREBY PROMOTING COST EFFICIENCY.
- ENABLES QUICK DECISION MAKING BY IMPROVING EFFICIENCY IN TERMS OF COST AND INCREASE THE MANAGEMENT BANDWIDTH TO FOCUS ON CORE ACTIVITIES.

Syngene is a global CRAMS player providing end to end services in the entire value chain of forming a drug from a molecule.

It works with client around the world. Geography wise 76% revenue contribution is from US, followed by 12% from Europe.

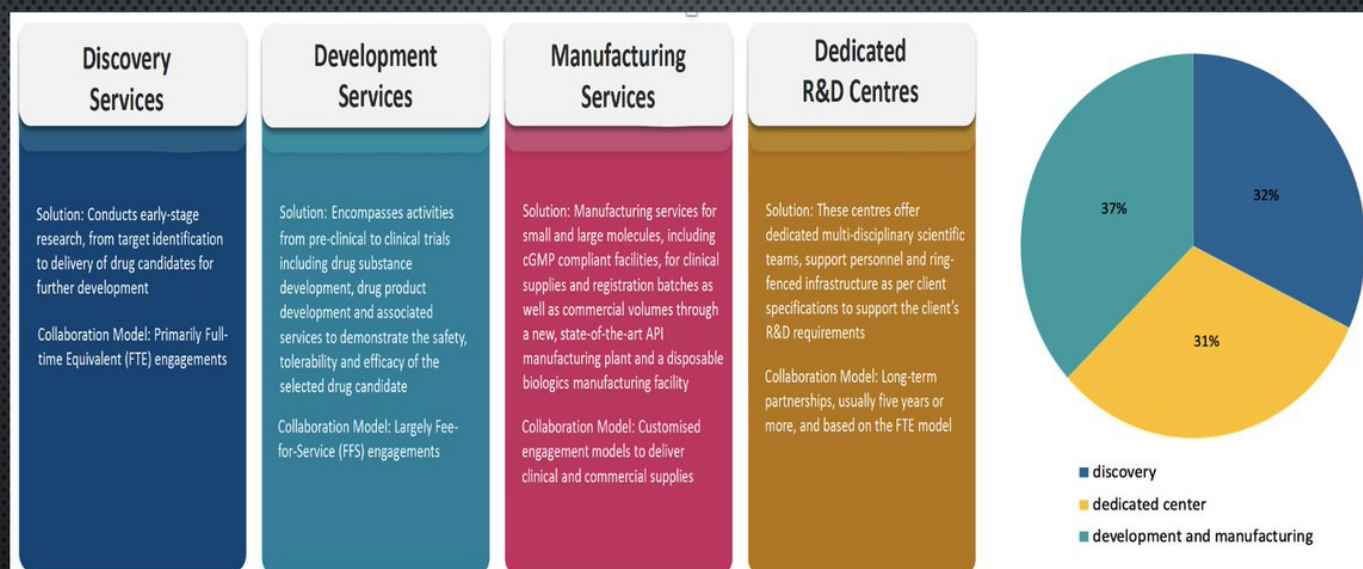
## ABOUT SYNGENE INTERNATIONAL LTD

- SYNGENE INTERNATIONAL LTD WAS INCORPORATED IN 1993 AS A CRO BUT OVER THE YEARS IT HAS STRATEGICALLY CONVERTED ITSELF INTO A CRAMS PLAYER PROVIDING END TO END CUSTOMIZED SERVICES STARTING FROM EARLY DISCOVER TO COMMERCIAL SUPPLY OF API FOR NOVEL MOLECULAR ENTITY (NME).
- SYNGENE WORKS WITH CLIENTS FROM AROUND THE WORLD TO FIND SOLUTIONS TO THEIR RESEARCH, DEVELOPMENT AND MANUFACTURING CHALLENGES FOR SMALL AND LARGE MOLECULES WHILE IMPROVING PRODUCTIVITY, SPEEDING UP TIME-TO-MARKET AND LOWERING THE COST OF INNOVATION.
- IT IS THE ONLY COMPANY IN INDIA PROVIDING SERVICE ACROSS THE COMPLETE VALUE CHAIN.
- THE COMPANY HAS AN INTEGRATED PLUG AND PLAY BUSINESS MODEL WHICH ENABLES CLIENTS MULTIPLE ENTRY POINTS AND ALSO IN CROSS SELLING VARIOUS SERVICES TO THE CUSTOMER DURING THEIR PRODUCT LIFE CYCLE.
- THEIR MULTI-DISCIPLINARY SKILLS IN INTEGRATED DRUG DISCOVERY AND DEVELOPMENT INCLUDE CAPABILITIES IN MEDICINAL CHEMISTRY, BIOLOGY, IN VIVO PHARMACOLOGY, TOXICOLOGY, CUSTOM SYNTHESIS, PROCESS R&D, CGMP MANUFACTURING, FORMULATION AND ANALYTICAL DEVELOPMENT ALONG WITH CLINICAL DEVELOPMENT SERVICES.

Talking about its revenue from different segments almost 1/3rd revenue comes from each vertical.



## SEGMENTAL REVENUE

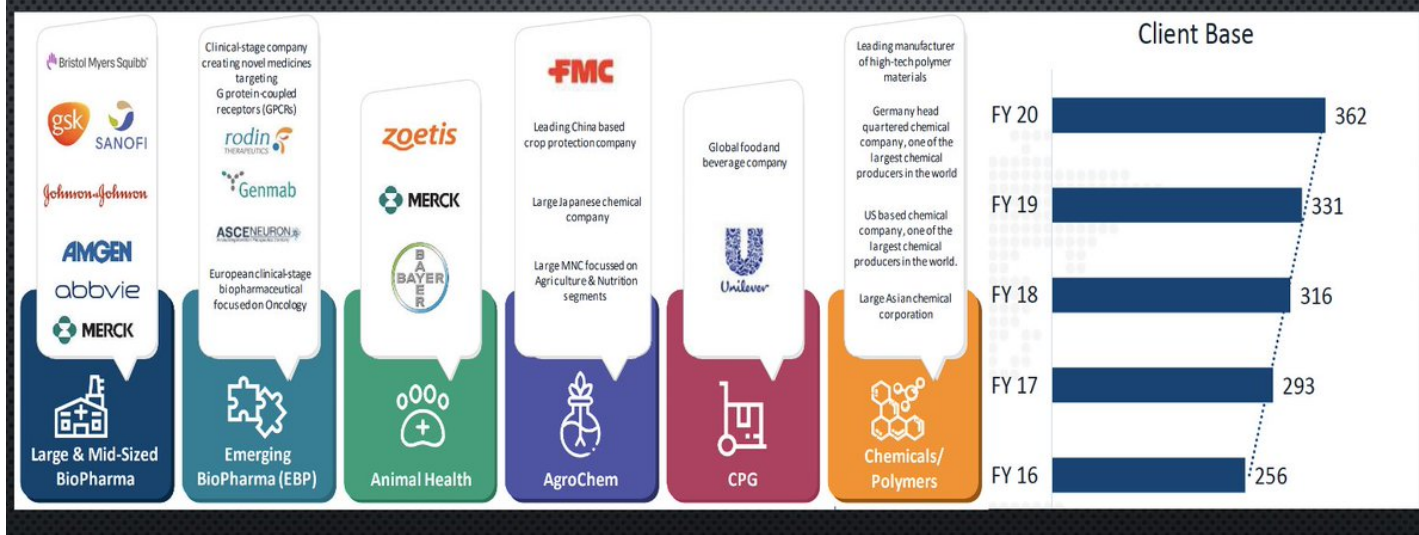


Its plug and play business model gives various entry points to customer.

They have a strong customer base with 25% of them having long term relationship of more than 5years.

However, client concentration is high with top 10 clients contributing 65%.

## INDUSTRY VERTICALS AND CLIENT BASE



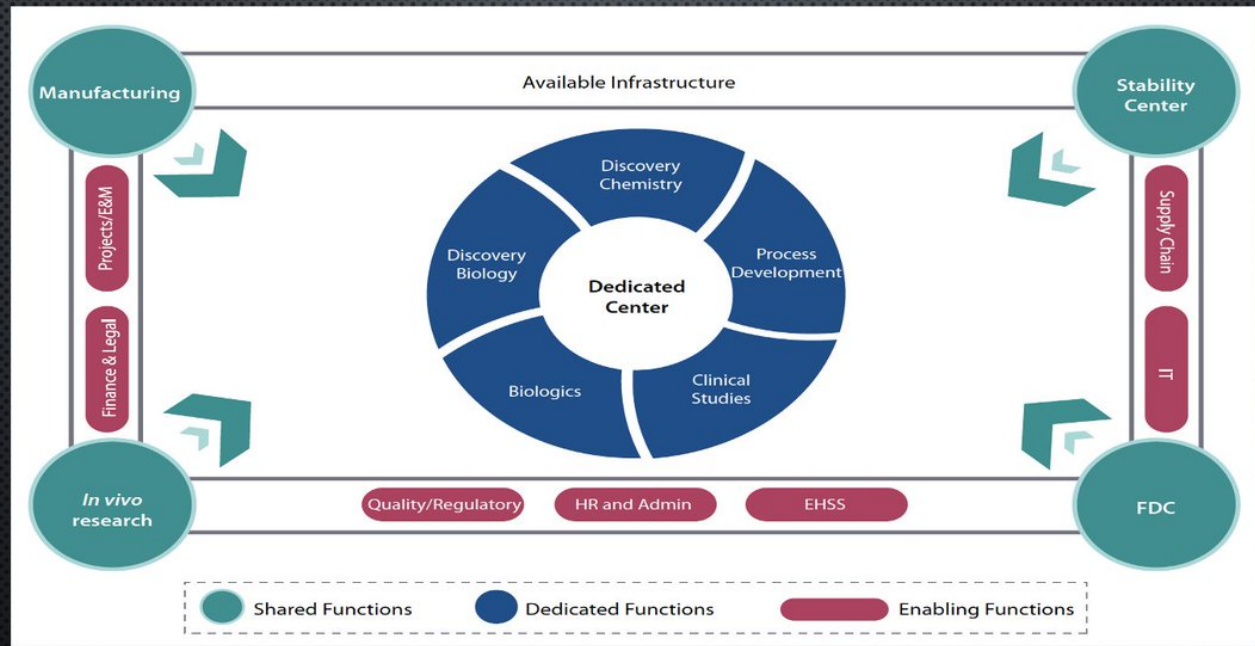
what about safety of clients data as Biocon (parent) is into similar business of syngene's client?

to ensure safety their DCs are Ring fenced which means every client's test results are secret and safe for them and specifically restricted only to the teams that need to see it

Because of DCs, the sponsor companies have access to additional services like shared(bioinformatics, viral testing etc) and enabling functions(HR, staffing, supply chain, ehss clearances etc)

result: operation efficiencies increases per FTE up to 25-30% and turnaround increases

# DEDICATED CENTER MODEL PROVIDES OPPORTUNITY FOR INNOVATION AND STRATEGIC RELATIONSHIP

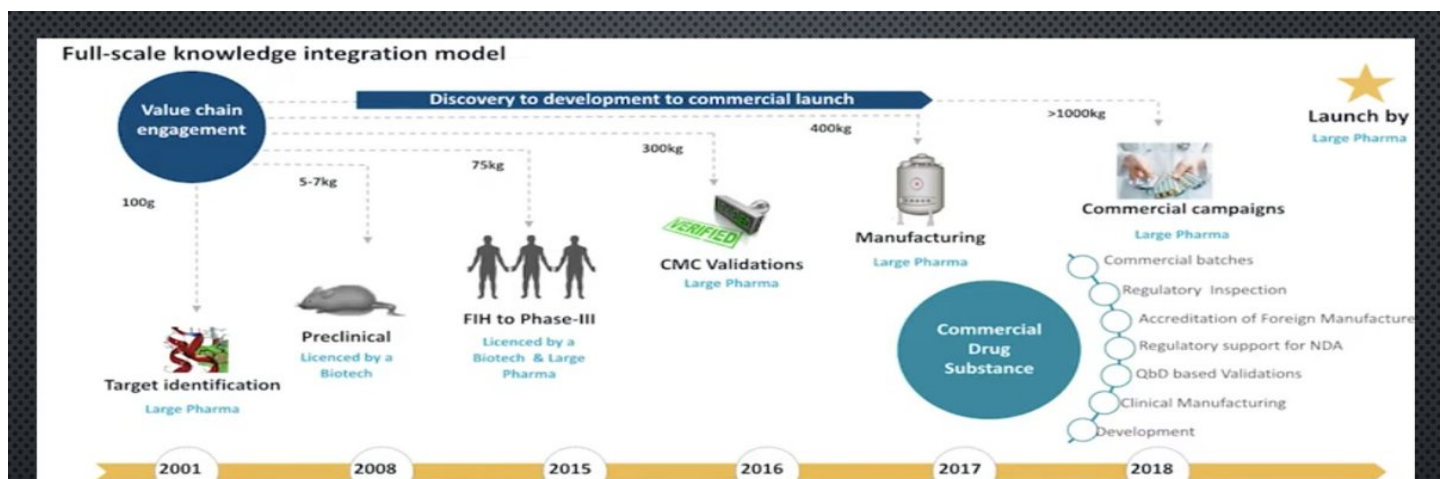


An example of how their vertically integrated model helps them in forming long term relationship with the clients.

In this stated example the Japanese client had the molecule but did not had the capacity to take it further.

but over the years their relationship with this client has evolved from working with below 1Kg level to now at >1000kgs commercial manufacturing.

win-win situation for both the parties.



How did it help Syngene?

- In 2018 Syngene entered into a multi-year manufacturing agreement with the company to manufacture a novel chemical entity for commercial launch in the Japanese market.
- Company successfully cleared audit BY PMDA, the regulatory authority for the Japanese market (most stringent regulatory)

How did it help the Japanese client?

- Steps for synthesis reduced from 17 to 12.
- Yield in one of the steps increased from 5% to 23%
- Early sourcing on second vendor.

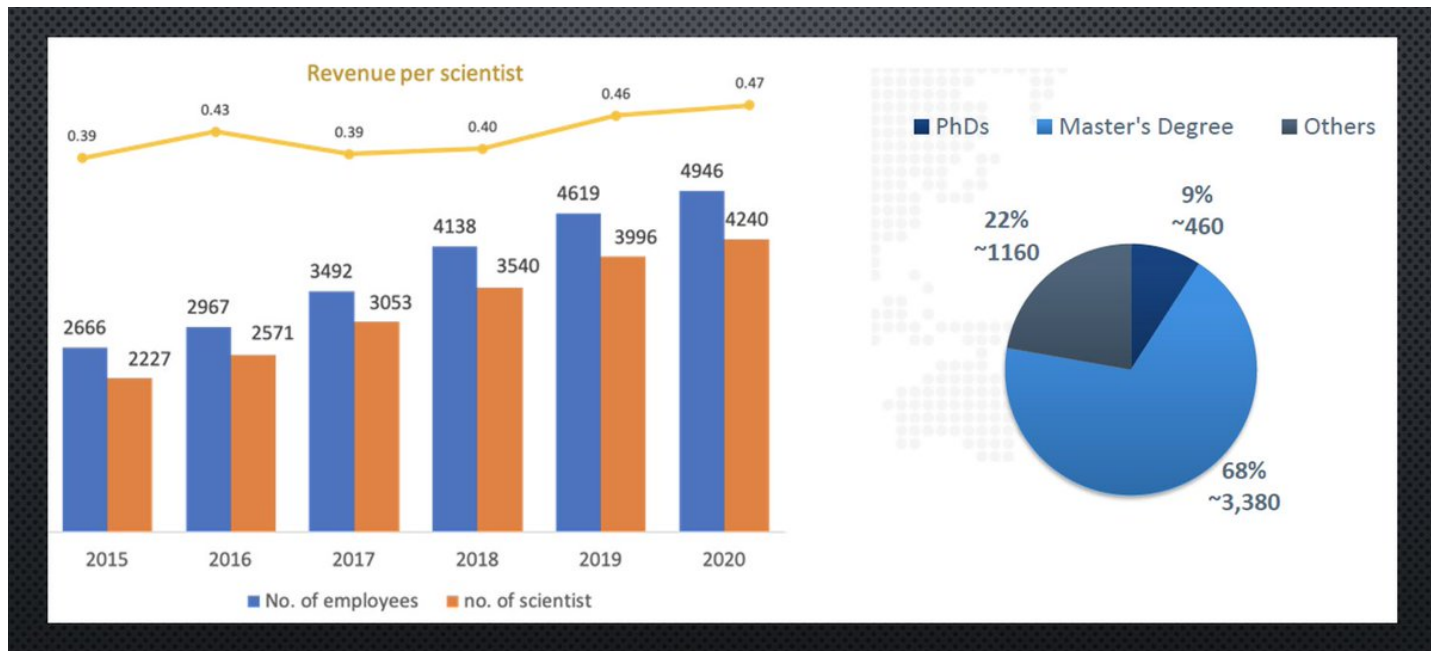


Just like IT companies, employee are an important asset for CRO.

Syngene is the largest CRO employer in India having largely qualified personnel.

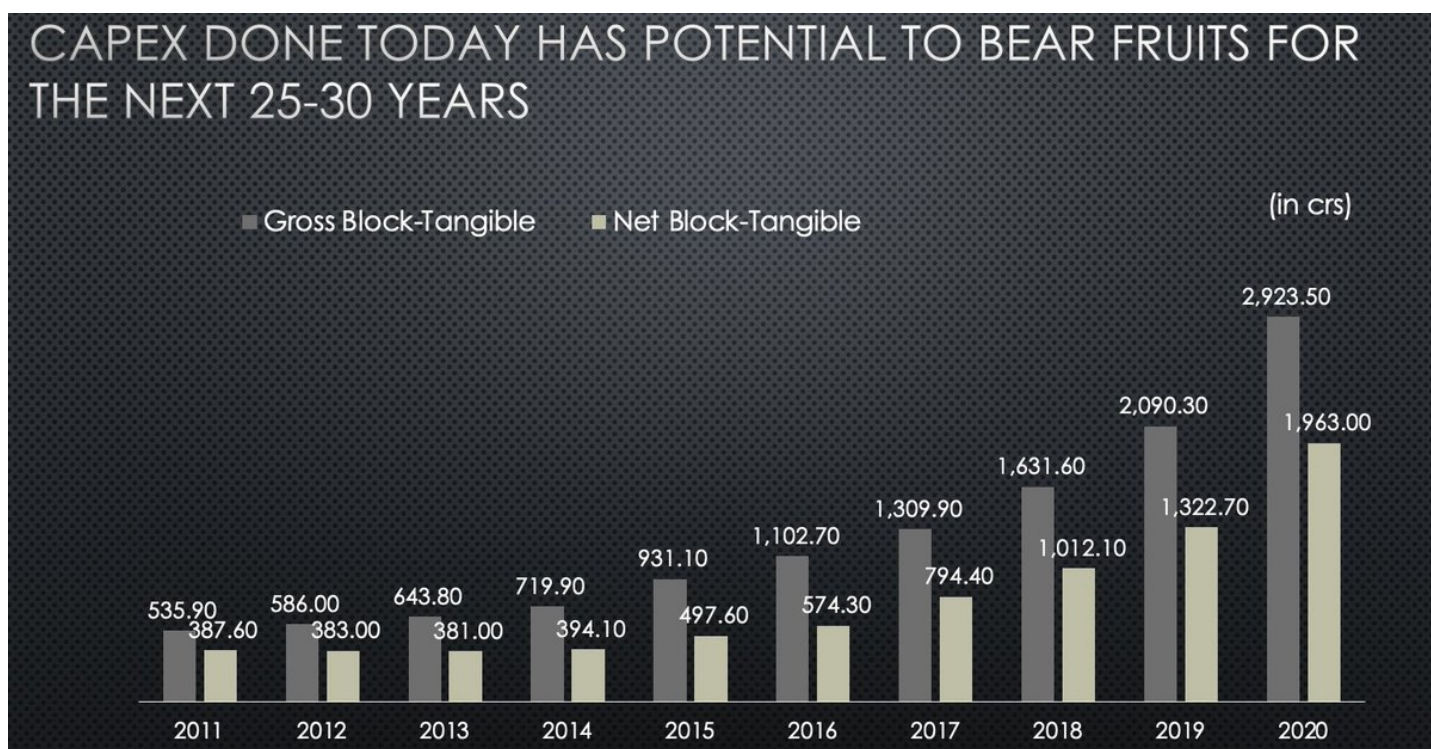
Employee cost is at 27-29% of revenue which is a major expense

This expense will come down once the manufacturing operations starts



Starting FY15, the management had guided capex of 550mn\$ which is expected to complete by FY21, out of which most have been already done.

Around 200mn\$ have been done primarily on four facilities : Syngene Research Center (Bengaluru) , Formulation development and Manufacturing



Plant, Biologics Manufacturing Plant and API Manufacturing plant.

Apart from this company has also invested in other facilities such as pilot finish facility for injectables, oral solid manufacturing, viral testing facility, bioinformatics, Gene therapy, microbiology lab etc.

It has a strong pipeline of work which gives good visibility for the next few years.

## STRONG PIPELINE OF WORK

Name of the company	Year	Scope of work
Canadian biotechnology	2017	develop five of their monoclonal antibodies followed by clinical manufacturing, process development and supply of material
Japanese specialty chemical	2018	Multiyear contract for manufacture "NCE" for commercial launch
GSK	2018	multi-year strategic Drug discovery services identifying new drug candidates across several therapeutic areas by setting up customised lab
AMGEN DEDICATED CENTER	2018	the infrastructure from the current 25,000 <u>sq.ft.</u> Up to 50,000 <u>sq.ft.</u>
ZOETIS (global leader in animal)	2018	R&D and commercial manufacturing
FRENCH Biotech company	2018	Collaborative project to strengthen bioinformatics
Artelo Biosciences	2019	R&D partner for new therapeutic class of anti-cancer medicine
Zumutor Biologics	2019	screen target antigens against Zumutor's proprietary human antibody libraries to identify and characterize novel antibody clones and further develop
Govt. of INDIA	2019	Collabration to set up Center for Advanced Protein Studies
MERCK	2020	Expanded collaboration with MERCK
Deerfeild discovery & development Corporation	2020	Fully integrated therapeutic discovery
PharmAust Ltd	2020	manufacture GMP-grade Monepantel for Human Clinical Trials

The inherent advantage of having one outsourcing partner: a single trusted supplier to manage all process steps; a flexible resource to accommodate rapid scale-up or wind-down as needed; end-to-end project management and tighter project delivery

## POSITIVE POINTS OF SYNGENE

- ONLY VERTICAL INTEGRATED PLAYER IN INDIA, PROVIDING END TO END SERVICES.
- STRONG PARENT AND EXCELLENT CORPORATE GOVERNANCE
- COMPANY HAS INVESTED 100BN\$ FOR API MANUFACTURING PLANT WHICH WILL BE OPERATIONAL FROM Q4FY21. THIS CAN BE THE NEXT LEG OF GROWTH FOR SYNGENE AS THE CHANCES OF BEING A PREFERRED SUPPLIER OF API FOR CLIENT IS QUITE HIGH
- THE INDIA FACTOR: GOOD TALENT OF EMPLOYEES AT A REASONABLE LOW COST, DIVERSIFIED CLIMATIC CONDITIONS, LARGE DEMOGRAPHICS, DE-RISKING DEPENDENCE ON CHINA FOR PROCUREMENT OF API OR R&D BY VARIOUS MNCs IS HELPING SYNGENE.
- TIME TAKEN FOR BUILDING STRONG AND LONG TERM RELATIONSHIP WITH CLIENT REDUCED FROM 5 YEARS TO 3 YEARS.
- OPERATING MARGINS IN THE UPPER QUARTILE WHEN COMPARED TO OTHER GLOBAL CRO'S.



As companies right from small start-ups to large global organisations turn to external partners to drive innovation and R&D productivity, the demand to fulfil the complete R&D lifecycle using a single service provider is growing.

## ENTRY BARRIER FOR OTHER PLAYERS

- HUGE INVESTMENTS
- STRINGENT REGULATIONS
- HIGH SWITCHING COST FOR CUSTOMER
- STICKY CLIENT
- IP PROTECTION RISK
- TIMELINES AND AFFORDABLE COST

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