

# STRUCTURAL ELEMENTS OF SEED- AND-BREED ASSISTANCE (RUSSIA)

- FOR TECHNOLOGY DEVELOPMENT - 232
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# FACILITIES FOR TECHNOLOGY DEVELOPMENT

## BUSINESS-INCUBATORS (64)

- AS A PART OF TECHNOPARCS AND INNOVATION TECHNOLOGICAL CENTERS (MES, FASIE, RFTD)
- REGIONAL (MEDT + REGIONAL RESOURCES), 112 UNDER CREATION, 39 ARE OPEN (11 OF THEM ARE FOR INNOVATIVE ENTERPRISES)
- AS ELEMENTS OF SPECIAL ECONOMIC ZONES

## TECHNOPARCS (69)

- MOST OF THEM WERE CREATED BY UNIVERSITIES DURING USSR PERIOD AND RELIED ON SUPPORT BY GOVERNMENT. IDEOLOGY – TO INCUBATE AND COMMERCIALIZE R&D RESULTS

## INNOVATIVE TECHNOLOGICAL CENTERS (77),

- SELFSUSTAINING FACILITIES, LATEST STAGES OF BREEDING (EXCEPT SMALL PART OF BUSINESS INCUBATOR)

# PROBLEMS



## WITH BI:

- NOT TOO MANY CLIENTS (SOME PARTICIPANTS OF FASIE's **START** AND **UMNIK** PROGRAM BECAME CLIENTS)
- STILL WEAK MANAGEMENT TEAMS AND NOT ENOUGH METHODOLOGICAL MATERIALS – “HOW TO RUN SUCCESSFUL BUSINESS INCUBATOR”
- STRICT FORMAL CRITERIA TO LEAVE AND NOT QUITE CLEAR SITUATION WITH FURTHER DEVELOPMENT
- LIMITED INSTRUMENTS FOR SUPPORT

## WITH TP:

- NO SUPPORT BY GOVERNMENT UNTILL NOW, THEY DO NOT FIT MEDT's PROGRAM FOR BUSINESS INCUBATORS AS THEY ARE FEDERAL NOT REGIONAL PROPERTY

## WITH ITC:

- STILL FEW WELL DEVELOPED EXAMPLES

## ITCs are organized:

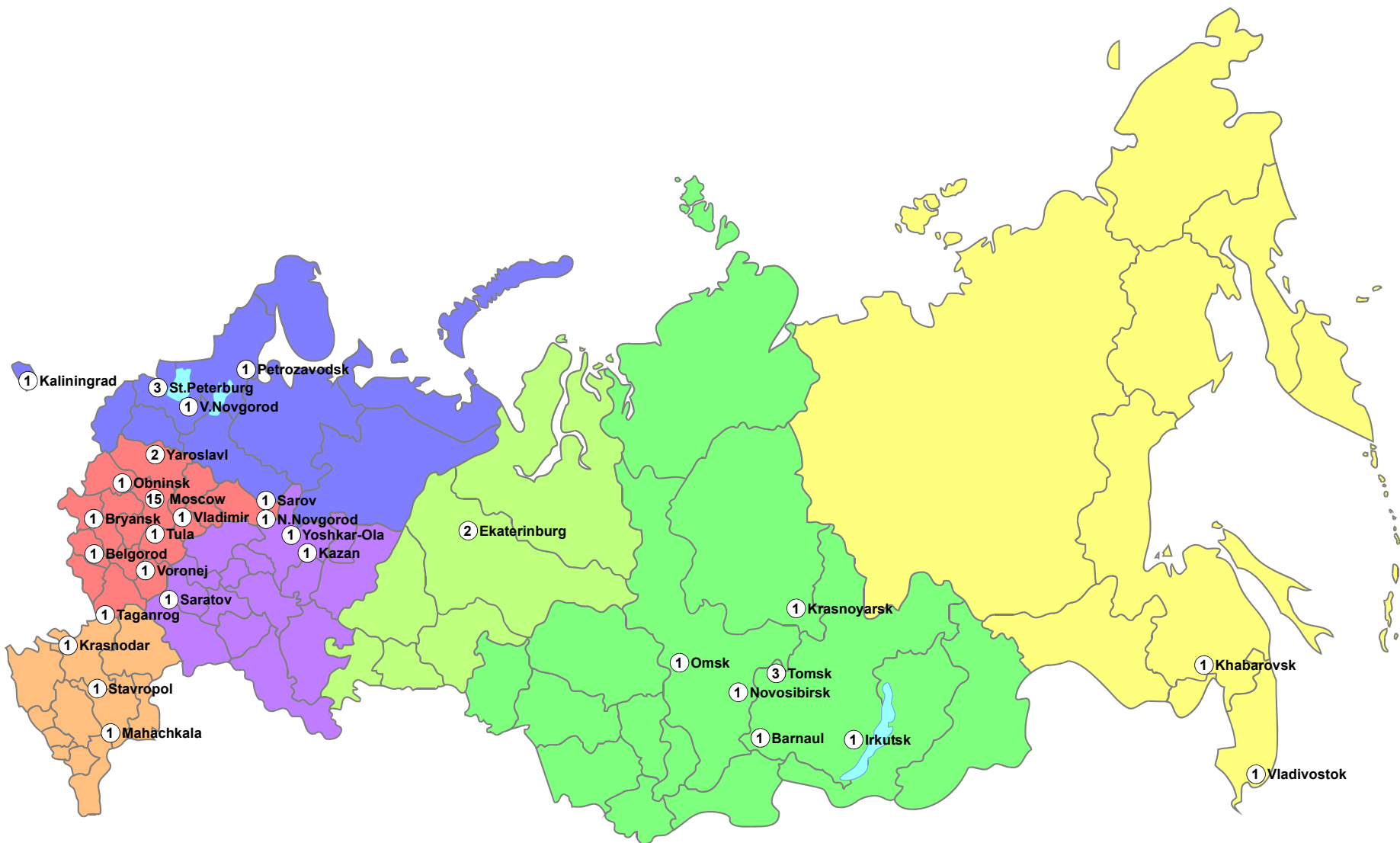
- To form the favorable conditions for Small Innovative Enterprises development;
- To stimulate innovation activity in regions with high concentration of scientific, technical, industrial potential.

## ITC's activity is supported by:

- Ministry of Education and Science of Russian Federation;
- Foundation for Assistance to Small Innovative Enterprises;
- Russian Technological Development Fund;



# Locations of Innovative-Technological Centers in Russia

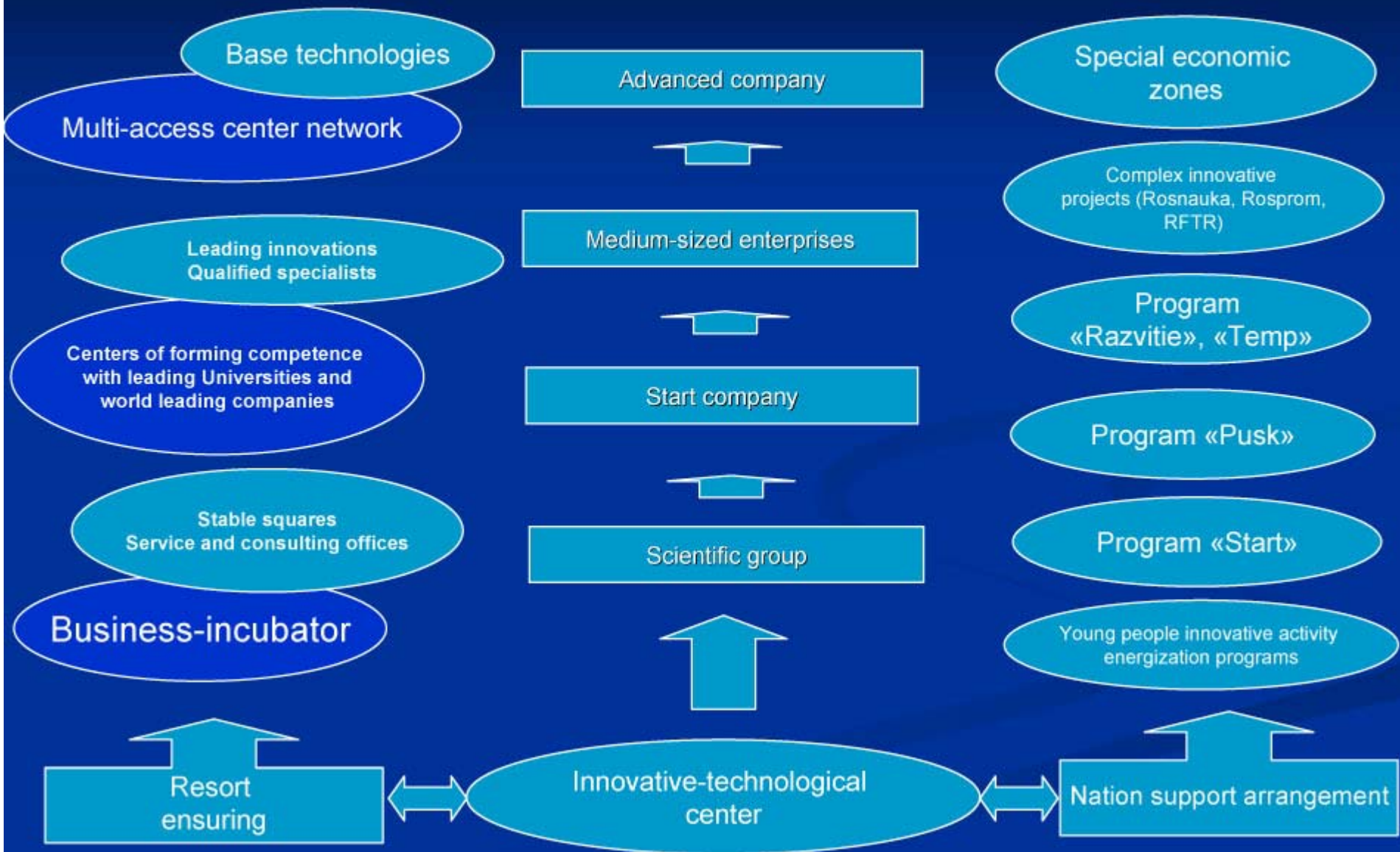


Federal districts: ■ Central ■ North-Western ■ Southern ■ Privolzhsky ■ Ural ■ Siberian ■ Far-Eastern  
Altogether 62 Innovative-Technological Centers are situated in Russia. 32 of them are members of the Union.

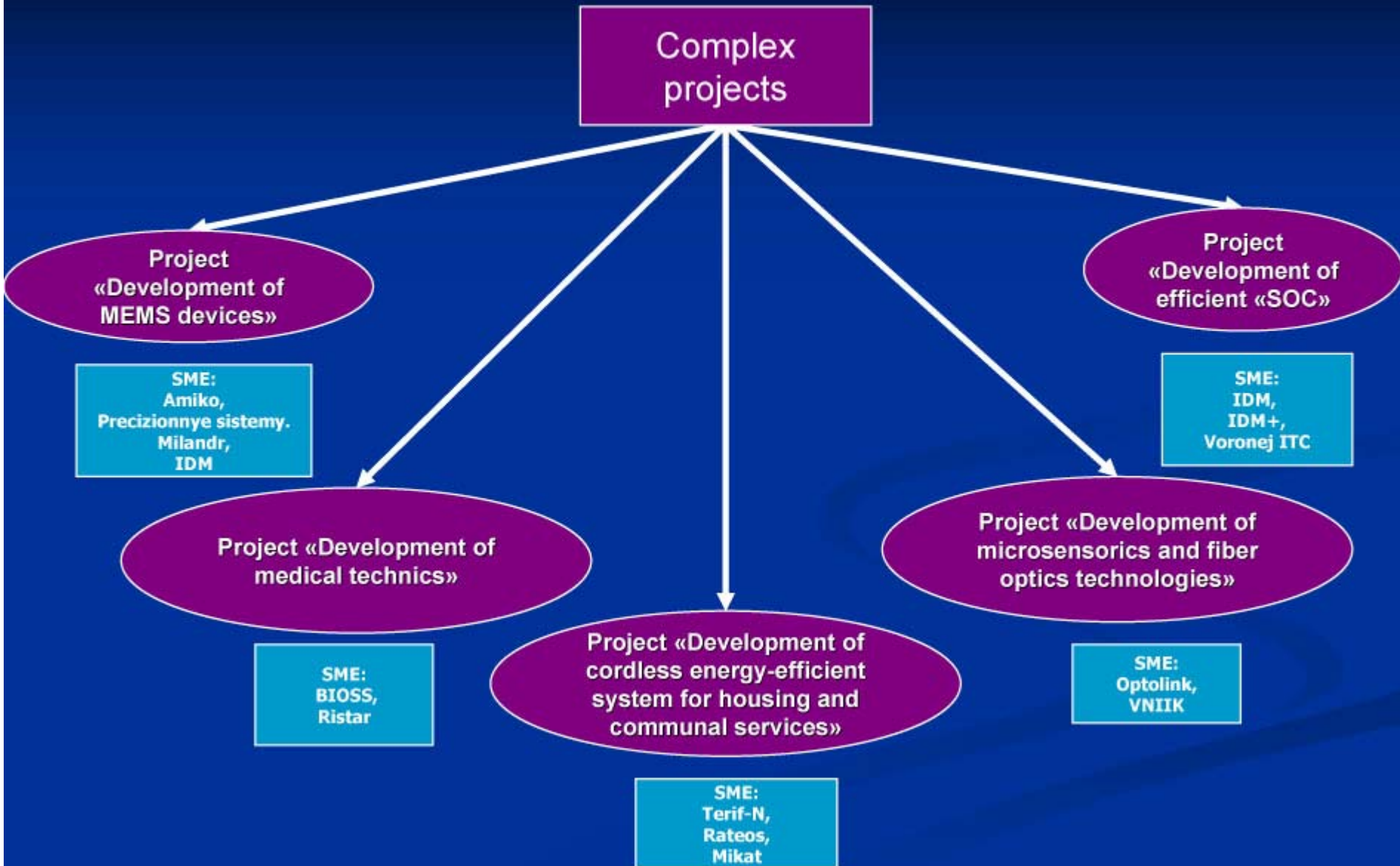
# **Zelenograd ITC** **innovation infrastructure for development** **start-up companies**



# Business incubation system of science intensive companies on the innovation-technological centers basis



# Involving start-up companies in complex projects





# Innovation and technological centers as elements of modern technological infrastructure for innovation activity (by the example of Zelenograd ITC)

## Through cycle of electronic production manufacturing

MAC «Microsystem technics and electronic component base»

GSI and MEMS designing.  
Photomask production.  
Phototyping.



Modern electronic component base.

MAC «Circuit boards of high accuracy rating»

Phototyping, production and testing of 5<sup>th</sup>-class precision circuit boards.



High class precision circuit boards.

MAC «High-accuracy assembling of electronic goods and gear»

Superficial assembling, reverse assembling, fine pitch chip installation.  
Multicristal modules technology.



Sensitive electronic assemblage.

MAC «Machining process and framing of electronic goods»

Machining process.  
Laser processing.  
Powder coating.  
Moulds.



Broad nomenclature of modern buildings for electronics.

# ITC as elements of scientific-innovation and educational activity development in interaction with world leaders

Devices and system design institute  
**CADENCE (USA)**



Center of the computerised modeling  
of the electronics equipment  
**Aglient Technologies (USA)**



Center in circuit simulation  
**Synopsys (USA)**



Center of the IC systems development  
**Unique IC's (Malaysia)**



Center of the solide-state structures  
instrumental moleling  
**Synopsys (USA)**



**Microsoft IT Academy (USA)**



Center **Intel (USA)**  
Computing platform iPAT



Center of the electronic devices design  
**Mentor Graphics (USA)**



Computerized diagnostics and visualization center  
**CRDF (USA), Panametrics (USA),  
Leipzig Universitat (Germany)**



Center of CAD-software

**FreeScale Semiconductors (USA)**



Perspective technologies of the opto- and nanoelectronics :

**University of Padova -INTAS,  
NATO, University of Madrid - INTAS,  
NATO, University if Florida - CRDF**



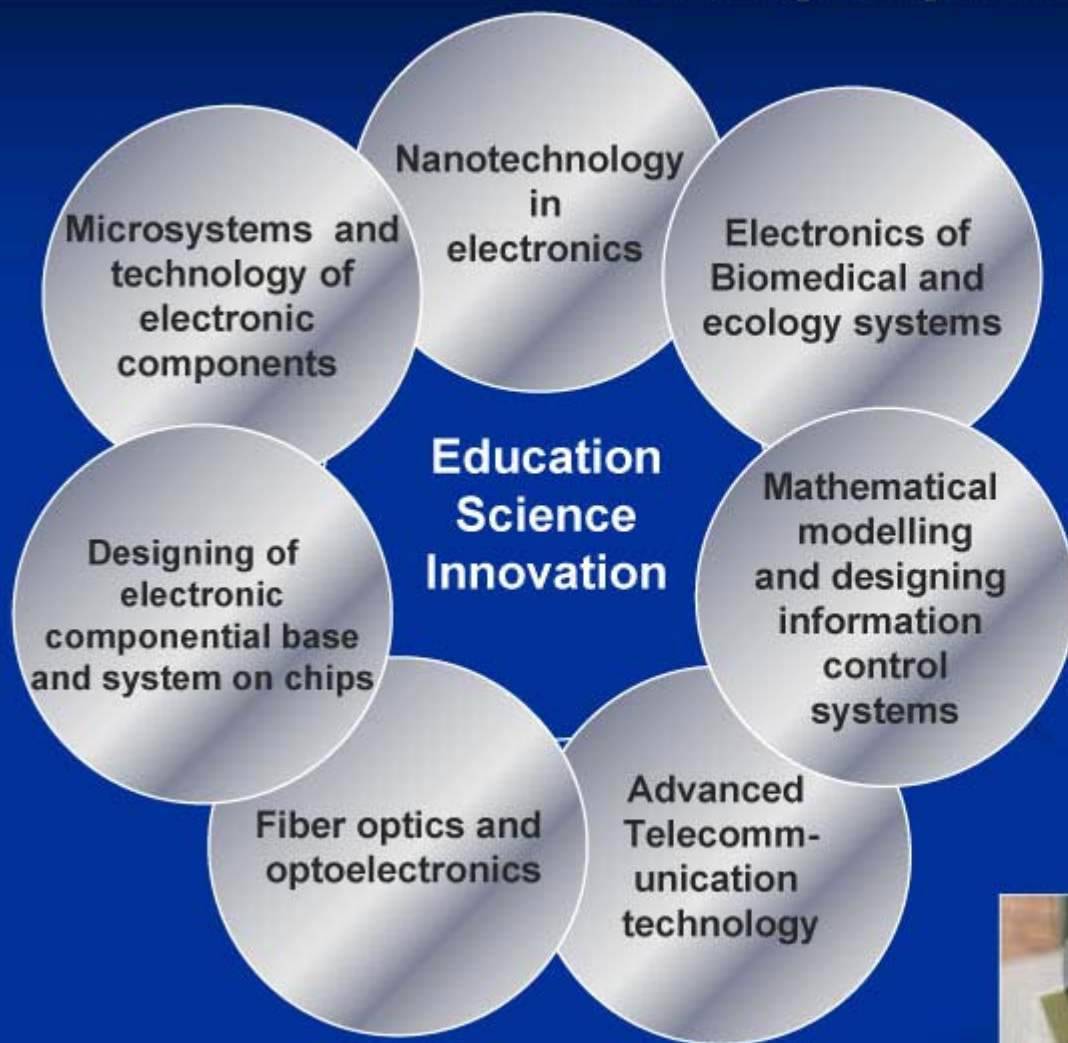
Center of electromechanical CAD-software  
**PTC Software and Services (USA)**  
(is being created)



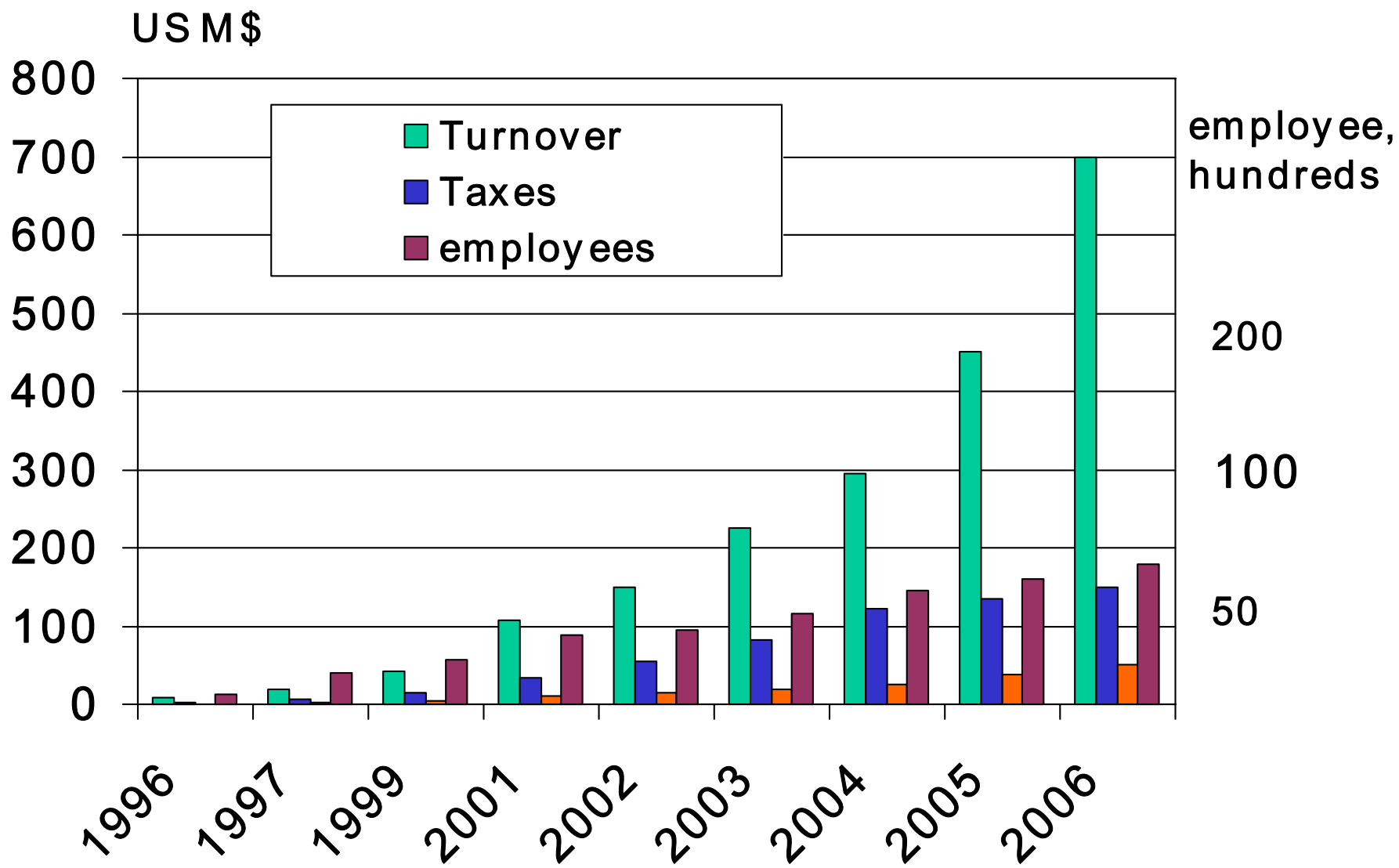
Center of telecommunicational  
equipment  
**CISCO (USA)**  
(is being created)



**National Project “Education” –  
creating centers of formation competences (CFC) – infrastructure for uncubation  
of start-up companies**



# *ITC's parameters*



# INFORMATION AND ANALITIC CENTERS

- **ANALITICAL CENTERS**
  - WHERE AND HOW TO BE EDUCATED AND TRAINED FOR BUSINESS,
  - WHERE AND HOW TO GET FINANCING,
  - HOW NOT TO MAKE WRONG STEPS
- **KNOWLEDGE AND DATA BASES**
- **INFORMATION RESOURCES** – [WWW.MIIRIS.RU](http://WWW.MIIRIS.RU) (OFFICIAL),  
[WWW.INNOVBUSINESS.RU](http://WWW.INNOVBUSINESS.RU) (PRIVATE), [WWW.RTTN](http://WWW.RTTN) (OFFICIAL)
- **PROBLEMS**
  - NOT WELL KNOWN,
  - NOT QUITE TRUSTED,
  - TOO MUCH “NOISE” WHEN IT COMES TO SCIENTIFIC AND TECHNOLOGICAL PROPOSALS

# CENTERS FOR EXPERTISE AND CONSULTING

- **PUBLIC:**
  - TECHNOLOGY TRANSFER OFFICES (101)
  - CONSULTING OFFICES (15)
  - COUCHING CENTERS (6)
  - START-INVEST
  
- **PRIVATE:**
  - PATENT OFFICES (MORE THAN 500)
  - TECHNOLOGICAL BROKERS (DOZENS)
  
- **PROBLEMS:**
  - PUBLIC – NOT QUITE QUALIFIED
  - PRIVATE – QUITE EXPENSIVE FOR SEED-AND-BREED STAGE

# START-INVEST

## MAIN ELEMENTS OF NEW PROGRAM:

- JOINT PROGRAM OF MEDT, FASIE, VCs
- APPLICATIONS ARE PREPARED BY TEAM AND VCs
- VCs MONITOR START-UP'S COMPANY DEVELOPMENT
- START-UP COMPANY MOVES FROM PUBLIC FINANCING TO PRIVATE ONE WITHIN 1-2 YEAR
- VCs HAVE 25% OF PUBLIC MONEY

# TWO MAIN PROBLEMS

- FOR 15 YEARS SCIENCE WAS STRONGLY UNDERFINANCED – SMALL POOLS OF NEW R&D RESULTS AND YOUNG RESEARCHERS
- INDUSTRY IS STILL NOT QUITE ORIENTED FOR TECHNOLOGICAL INNOVATIONS



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