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& Governments in Private Equity

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**THE FINAL REPORT OF THE SERVICE PROVIDER:  
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**Strategic Plan to Grow the Russian Venture Capital Industry**

**Presented to:  
Russian Venture Company  
Moscow, Russia**

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PROJECT OVERVIEW .....	3
Project Objectives/Focus .....	3
Project Methodology.....	3
Country Program Researched .....	3
<i>Fund &amp; Support Services Evaluated in Each Country: Programs for Investment &amp; SME Creation.....</i>	3
PROJECT CONCLUSIONS & RECOMMENDATIONS TO RVC .....	4
Introduction: The Approach to Making Project Conclusions/Recommendations .....	4
General Conclusions to the RVC .....	4
<i>Fund Strategies of Governments have Commonalities with Each Another.....</i>	4
<i>VC Success Requires Interlinked Networks in Innovation, Technology Creation &amp; Entrepreneurship ...</i>	4
<i>VC Creation is Cumulative .....</i>	5
<i>Creativity &amp; Political Will Overcomes Problems that Government Fund-of-Funds Face .....</i>	5
Project Objective #1: Solutions on New Venture Programs/Products for Russia .....	5
<i>Recommendation #1: Execute a Venture Lending Fund to Finance More SMEs in Russia .....</i>	5
<i>Recommendation #2: Create Deal Flow Funds to Increase Technology &amp; SME Creation.....</i>	7
Project Objective #2: Solutions to Build the Human Capital Pool of VC Staff in Russia .....	11
<i>Discussion: Issues in Building More &amp; Better VC Investment Officers and Teams in Russia.....</i>	11
<i>Recommendation #1: Educational Programs to Build Professional Capabilities in Russian VC .....</i>	12
<i>Recommendation #2: Engage International Networks to Accelerate Skill Building.....</i>	14
<i>Recommendation #3: Build Networks to Develop Russia's Need for Better Trained Specialist &amp; Attract International Talent to the Country .....</i>	16
Additional Recommendations to RVC .....	18
<i>Recommendation #1: Build Networks with these Companies from Asia, Europe &amp; the US.....</i>	18
<i>Recommendation #2: Meet with these Firms; RVC Business Trip to the USA, November 2008.....</i>	18

## PROJECT OVERVIEW

### Project Objectives/Focus

1. Recommend international VC (venture capital) programs that might be adapted for use by the RVC to more quickly develop the Russian technology and venture capital market.
2. Recommend international training/development programs to develop the skills of Russian investment officers. Recommend other programs that build the human capital pool to grow the Russian technology VC market, e.g., attracting technology or VC professionals from foreign countries and the Russian business and PE (private equity) field to Russia VC.

### Project Methodology

Tom Nastas conducted Internet searches to find and analyze fund of funds (f-o-f), direct investment, grant making schemes and support programs used by governments and the private sector to develop innovation based, VC industries. Mr. Nastas also conducted telephone interviews when information was unavailable on the Internet, or to obtain direct information on country and investment programs.

### Country Program Researched

Brazil	Europe (UK, Germany, Finland, Norway, Sweden)
China	New Zealand
India	Singapore
Korea	Taiwan
Australia	United States
Canada (federal & provinces, e.g., Ontario, Quebec)	
DFIs/Governments: EBRD, World Bank Group & EU (European Investment Fund, EU Framework	

### *Fund & Support Services Evaluated in Each Country: Programs for Investment & SME Creation*

Mr. Nastas evaluated programs to build knowledge economies in these countries. They include:

<ul style="list-style-type: none"> <li>• Fund-of-funds</li> </ul>	<ul style="list-style-type: none"> <li>• Business plan competitions (companies &amp; programs)</li> </ul>
<ul style="list-style-type: none"> <li>• Direct investment funds</li> </ul>	<ul style="list-style-type: none"> <li>• Government outreach programs to diaspora</li> </ul>
<ul style="list-style-type: none"> <li>• Grant making schemes</li> </ul>	<ul style="list-style-type: none"> <li>• Government (federal, regional &amp; local) programs in R&amp;D, product development, promotion, marketing &amp; sales; funding, outreach &amp; networking</li> </ul>
<ul style="list-style-type: none"> <li>• Business development services to SMEs, SME creation/growth</li> </ul>	

Only the most useful and important VC fund programs and VC support programs with the potential to create additionality (to build the Russian VC market in ways that the RVC is not doing now) are listed, presented and evaluated in this report and in the Appendix, pages 1-52.

## **PROJECT CONCLUSIONS & RECOMMENDATIONS TO RVC**

### **Introduction: The Approach to Making Project Conclusions/Recommendations**

Tom Nastas created and executed R&D, product/technology development, f-o-f, seed capital, early stage, growth capital and cash flow VC schemes with total capitalization of over \$750 million in:

- America
- Canada
- W. Europe (UK, France, Germany, Italy, Greece, Belgium)
- Africa (Kenya, Tanzania, Uganda, South Africa, Botswana, Mozambique, Zambia, Ghana)
- CEE (Latvia, Slovakia)
- CIS (Kazakhstan, Russia)

Mr. Nastas used his knowledge and experiences from investing in these countries to support data analysis, conclusions and recommendations.

### **General Conclusions to the RVC**

#### ***Fund Strategies of Governments have Commonalities with Each Another***

1. Commonality #1: Most f-o-f and direct investment schemes of governments have similar objectives & characteristics, e.g., they require co-investment from private investors (51%), some provide fee subsidies (to pay fund operating costs, salaries, etc.), some limit risk and cap upside while others let investors purchase Governments' investment in funds, etc. These programs do what the RVC is currently doing, and no new knowledge can come from them, although networking can be useful.
2. Commonality #2: Creation of a VC industry requires some form of government intervention, either direct/national VC programs like Yozma (Israel, successful), Technology Investment Program (Singapore, not so successful) or indirect programs to fund R&D and stimulate VC (Singapore, Biopolis program, too early to determine if successful or not). There are some that criticize the RVC and its policies, but this opposition only reflects their ignorance and naivety of how markets develop and the role of Government in catalyzing VC.

#### ***VC Success Requires Interlinked Networks in Innovation, Technology Creation & Entrepreneurship***

1. A national 'fund of fund' strategy is not the 'single' factor in the creation of a VC industry. There are multiple enabling factors required for success. Policies to create VC industry must be broader than just VC. For example, from 1970-1990 Israel funded R&D & innovation grant programs to build deal flow so VC investors had SMEs to invest in, and the creation of entrepreneurial teams to commercialize technology to domestic customers and world markets.
2. Enabling factors for VC to develop and grow include a pre-existing high technology industry, R&D and innovation capabilities to generate deal flow, cluster, network and networking effects that build critical mass, entrepreneurs, intelligent capital & VC support services. VC programs without these enabling conditions (either before or after scheme execution) fail.
3. An active VC industry requires a continuous flow of deal flow. VC does not emerge if deals do not exist and if new SMEs are not created in sufficient numbers to exploit opportunities.
4. VC money flows to established high tech centers, in growing markets with entrepreneurial talent regardless of the geographical location of the VC industry. This explains why China has achieved

more VC vs. Singapore in a shorter period of time even though Singapore financed technology creation earlier than China.

### ***VC Creation is Cumulative***

1. 1<sup>st</sup> funds must be highly profitable, especially when a government takes the initiative to create a VC industry, since the private sector and VC investors look to the government to validate that VC investment can be profitable and successful. Strong early profitability develops cumulateness since it creates the reputation effects that enable 1<sup>st</sup> funds to raise new money for their 2<sup>nd</sup> fund, that demonstrate the creditability to attract new VCs and investors to a country. Early funds not highly profitable risk stopping the development of a VC industry.
2. Success in VC industry creation requires experimentation & failure, welcome them, but learn from them. Expect a 'pre-emergence' period when many VC & start-up programs fail to build learning curve lessons and experiences as the building blocks for 'unsatisfied demand' for VC to emerge.
3. Collective learning and reputation effects are essential for VC growth. VCs learn from each other, and in competing with each other they also cooperate to build the talent pool for VC to develop.

### ***Creativity & Political Will Overcomes Problems that Government Fund-of-Funds Face***

1. Israel's small market disadvantage, by forcing it very early to create links with the US, directly contributed to its competitive advantage in high tech during the 1990s. Israeli's creativity to build, invest in and nurture these networks demonstrates that competitive disadvantages can be overcome in any country including Russia, but only if:
  - Political will exists; and
  - People involved have the force of personality to resist distortions that politics, politicians, bureaucrats and special interest groups attempt to introduce into the market.

## **Project Objective #1: Solutions on New Venture Programs/Products for Russia**

### ***Recommendation #1: Execute a Venture Lending Fund to Finance More SMEs in Russia***

Tom Nastas recommends that the RVC implement a venture lending investment scheme, modeled to the US Small Business Investment Company (SBIC) program. SBICs fill the market niche left vacant by VC; in the US for example, only 5% of the 500 fastest growing SMEs receive VC money. The other 95% of SMEs require money from different financial institutions and investors.

### **Venture Lending Defined/Features**

1. A public/private partnership. In the USA, venture lending companies are called SBICs (Small Business Investment Companies). SBICs are privately managed firms licensed by the U.S. agency called the Small Business Administration (SBA) to make equity/debt investments. SBICs borrow money from the SBA at low interest rates; re-lend money at a higher interest rate with most, but not necessarily all investments having an equity component.
  - SBICs invest in early growth & expansion companies, in the range of \$250,000-\$5 million per deal.
  - SBICs fill the niche left vacant by VC; finance SMEs that will not grow big enough, fast enough, or owners that don't want VC.

2. SBICs earn current income to compound IRR to generate equity-like IRR, so the pricing/ownership % required from equity is less vs. VC deals structured as 100% equity.
3. Some statistics from the SBIC program implemented in the US.
  - Since its start-up in 1958, SBICs invested \$50.6 billion of long-term debt and equity to more than 102,000 SMEs, with \$2,278.5 billion invested in 1,152 SMEs in 2008.
  - From 2004-2008, SBICs invested \$12.63 billion of debt & equity capital into 6,614 SMEs in the US, with an average equity investment per SME of \$654,357-\$812,539 and an average debt investment per SME of \$530,849-\$759,943.
  - Many well-known U.S. companies received money from SBICs, including Intel, Apple Computer, Palm Computing, Federal Express, Callaway Golf, Whole Foods Market, Staples, Quiznos, Outback Steakhouse and Costco to name a few.

See pages 1-7 for a full analysis of the SBIC program and detailed descriptions of its value and relevance to Russia and the RVC.

### **International Experiences**

1. Venture lending, quasi-equity type programs were adopted and implemented in Canada, Europe, Asia and Africa by development finance institutions (DFIs) like the Federal Business Development Bank of Canada (\$80 million Venture Loan Program), IFC (\$280 million African Succession Fund), and the European Commission (\$30 million Technology Performance Financing Scheme)<sup>1</sup> in the early 1990s.
2. As one example of its use in emerging markets, India received a \$45 million loan from the World Bank in 1988/98. Money was re-lent at commercial rates to four public-sector financial institutions to establish VC. The loan was for 16 years—including a 7 year moratorium on interest & repayment.
  - Of the four VC companies funded<sup>2</sup>, TDICI, Bangalore, a subsidiary of ICICI (Industrial Development Bank of India) and UTI-the state-run mutual fund was the most successful.
  - TDICI's first fund – Vecaus 1--invested in 40 SMEs including VXL, Mastek, Software Systems, Microland and Sun Pharmaceuticals. Through 1994, IRR was 28%, an exceptional result for a first-time fund.
  - This program is credited as seeding VC in India, although it took almost another 15 years before Indian VC was truly institutionalized. TDICI spillovers formalized the Indian VC industry. K. Nadkarni (former president) established the IVCA and was the Indian partner for the first US firm in India (Draper, 1994). Another manager joined ICF Ventures, a fund financed by overseas investors. Several TDICI alumni became managers of Indian high technology firms.

### **Relevance of the SBIC/Venture Lending Product to Russia & the RVC**

1. ***Russian VCs must invest in high growth*** SMEs with 35%+ IRR, yet few Russian SMEs meet such criteria. Low/slow growth SMEs that do not meet this requirement don't expand to their potential due to a lack of medium-term, affordable capital.

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<sup>1</sup> IVI was an advisor in the creation and execution of these funds in Canada, Africa and Europe. Information on these funds, costs, results, etc., is still unpublished and not available in the public domain.

<sup>2</sup> No information exists on the other three funds.

2. ***SBICs established the product and learning experiences*** for medium-term lending to develop in the USA, India, Africa, etc., and they can benefit Russia in several ways including:
  - Increase the # of Russian SMEs that can raise money, grow and develop. Many SMEs have good cash flow, but work in medium growth markets that lack the fast and rapid growth that Russian VCs require for investment. Also many entrepreneurs, some with fast growth companies, will not sell equity to VCs, yet still need medium term money to grow their business to its potential.
  - Provide medium term money to young SMEs. The lack of medium term money is a huge funding gap in Russia, and without a solution to fill this gap, the innovation sector will not develop to its potential in Russia.
    - Russian SMEs are only able to access short-term money (< & up to 12 months) from Russian banks which requires SMEs to refinance loans every year.
    - Refinancing short-term loans is expensive and reduces SME cash flow and profitability, but it also has one very large negative effect on the Russian economy; when the Russian economy is in a liquidity crisis as it is now, in October 2008, banks will not or can not re-finance SME loans.
    - The lack of refinancing capital puts SMEs into loan default even though the fundamentals of their business are strong. Without the money to refinance short-term loans, SMEs are forced to cut production, reduce salaries and dismiss employees, all negatives for the Russian economy.
    - Reductions in production, salaries and work force make a recession in Russia more probable for Russian SMEs and transform an international crisis into a financial tsunami for this segment of Russian industry.
3. ***A SBIC program attracts institutional investors*** like insurance companies and pension funds to VC, new sources of money for risk capital investing. SBICs issue debentures, which are guaranteed by the SBA. Pools of these SBA guaranteed certificates are sold to institutional investors through public offerings. Debentures have a life of ten years and provide for semi-annual interest payments and a lump sum principal payment at maturity. The cash feature of the bonds with the risk protection from the US Government guarantee helped institutionalize VC investment in the US.

The availability of medium term money and investors financing SMEs was a key factor that stimulated the strong US economic growth in the 1960s, 1970s and the 1980s; growth that continues today, even in the current US financial crisis. ***Leadership from the RVC in the creation of a medium-term financing facility for Russia is one of the single most important initiatives that it can execute to grow the Russian capital markets and institutional VC in Russia.***

### ***Recommendation #2: Create Deal Flow Funds to Increase Technology & SME Creation***

Tom Nastas recommends that the RVC create deal flow funds, modeled to these investment funds in Asia, Europe and North America. Deal flow funds are organized to finance new technologies around a single product or service that solve significant technical challenges and market needs; GameChanging technologies disrupt industry standards to increase the quality and quantity of deals for VC investors. Deal flow funds are different than the general purpose funds that the RVC has already financed.

Gamechanging technologies create excitement, interest, attention, networks, etc., to attract the very best scientific minds, attract the very best and most networked investors, and catalyze networks for collective learning and collaboration in VC, entrepreneurship and knowledge creation to Russia. Increasing the deal flow of technology investment opportunities is a priority need in Russia.

1. ***The BlackBerry Partners Fund™ (Research in Motion, Blackberry)***, the iPhone Fund (Kleiner Perkins, Caufield & Perkins) and the Google Android Developer Challenge (Google) are international examples of deal flow funds around a single product or service. In just 12 months from their inception, these three funds evaluated over 4,800 business plans & funding applications, and invested a total of \$56.55 million into 27 SMEs and developers. ***Such results demonstrate the value, attraction and industry creation that deal flow funds have in the market to stimulate new ideas, new SMEs, new innovation and more entrepreneurship.*** These deal flow initiatives are role models and point the way for the RVC to create deal flow funds for the creation of new innovation, technology and SMEs in Russia. See Appendix, pages 8-13 for details on these deal flow funds.
  - Canadian corporation Research in Motion (RIM), manufacturer of BlackBerry®,. The BlackBerry Partners Fund™ (<http://www.blackberrypartnersfund.com>) is a \$150 million venture capital fund focused on applications and services including mobile commerce (payments, advertising, retailing and banking), vertical and horizontal enterprise applications, communications, social networking, location-based applications and services (navigation and mapping), media and entertainment, and lifestyle and personal productivity applications for the BlackBerry® and other mobile platforms. The Fund invests all stages of development and is co-managed by JLA Ventures (<http://www.jlaventures.com>) and RBC Venture Partners (<http://www.rbc.com/vp>).
    - The Fund's 'Jump Start' Program finances innovation in Smartphone application development. It provides entrepreneurs with capital of up to \$250,000. The initiative is designed to bring new and innovative ideas into the development process faster allowing entrepreneurs to focus on building great Smartphone applications instead of raising seed capital. Over 3,000 funding applications were received.
    - The Fund invests up to \$250,000 as a convertible debenture, to give entrepreneurs a standard financing package while giving the Fund early exposure to opportunities.
  - VC fund Kleiner Perkins (<http://www.kpcb.com>) created the iPhone VC fund (<http://www.kpcb.com/initiatives/ifund/index.html>).
    - This \$100 million fund finances market-changing ideas and products that extend the iPhone and iPod touch platform, to seed the development of applications for the iPhone & iPod. The fund also supports companies working on software for the iPod Touch, which shares many of the iPhone's functions but lacks its mobile phone capability. Apple provides the Fund with market insight and support.
    - The iFund finances seed, early- to late-stage investments in companies providing location based services, social networking, mCommerce (including advertising & payments), communication, and entertainment. The iFund™ invests in innovators pursuing transformative, high-impact ideas with an eye towards building independent durable companies atop the iPhone/iPod touch platform. The iFund™ invests in all stage of investment and invests in SMEs building applications, services and components.
  - The Android is Google's mobile operating system to give it entry into the Smartphone business. Google will use the platform to enter the world of mobile advertising, just like has dominated web advertising. In November 2007, Google launched the \$10 Million Android Developer Challenge ([http://www.google.com/intl/en/press/pressrel/20071112\\_android\\_challenge.html](http://www.google.com/intl/en/press/pressrel/20071112_android_challenge.html)), to inspire innovation in the developer and SME community for mobile applications on the Android™ operating system. The Challenge awards cash prizes ranging from \$25,000 to \$275,000 to developers whose applications are picked by a panel of judges.



- Google awarded 20 developers cash for applications developed for its Linux-based mobile operating system Android. Google gave 10 winners' awards of \$275,000 each and 10 semi-finalists \$100,000.
- Google's award to Android applications developers is the latest success for next-generation applications on mobile devices that move software control increasingly away from carriers.
- Almost 1,800 developers entered the Google competition, which demonstrates the need for, and appeal of deal flow funds.

2. ***There are multiple projects where Gamechanging*** technologies are needed in Russia; more possible with some creative thinking.

- The processing of Russia's natural resources into new engineered materials for Greentech and alternative energy applications is an excellent example of a target for a deal flow fund. Russian SME Nitol Solar is having great success in processes silicon for solar cells for global customers. But they are the only Russian SME with real success in this market, but many more Russian SMEs could be successful with a deal flow fund and support services targeted to this growing market.
  - Nitol Solar manufactures key chemical components for the global photovoltaic industry from a chemical chlorine and silicon gas facility in Usolie-Sibirskoe, Irkutsk. The company's current and product encompass a number of products in the photovoltaic value chain from trichlorosilane gas through polycrystalline wafers used in solar cells. Nitol Solar's aim is to become a global leader in the efficient supply of products for the fast-growing photovoltaic industry. For more information, see <http://www.nitolsolar.com>.
  - Nitol Solar raised over \$600 million in equity/debt, confirmation that the processing of Russia's natural resources is a viable strategy to create new technology and innovation based SMEs. IFC, the investment arm of the World Bank invested \$50 million in equity investment and \$25 million loan to Nitol Solar to establish the company's new production facilities in Usoliye Sibirskoye. Polysilicon is a key material in producing solar cells and is in short supply globally, hindering the growth of the solar energy sector. Nitol Solar's projected output of 3,700 tons annually equals about 9 percent of 2007's global polysilicon supply.
  - Suntech America (<http://www.suntech-power.com>) the US subsidiary of Wuxi, China-based solar manufacturer Suntech Power Holdings Co., invested \$100 million into Nitol Solar and took equity stakes in two other silicon producers to ensure a constant supply of silicon for its solar panels.
- The extraction of natural resources from remote locations is a 2<sup>nd</sup> theme for a deal flow fund as GameChanging technologies are required to bring these projects to realization. For example, the natural gas field Shtokman has technical challenges that no one has solved; Russian SMEs can create these technologies or foreigners can; the choice is yours. A deal flow fund for Shtokman will catalyze new thinking, creative energy, new technologies and more SMEs seeking capital from Russian VCs.
- A 3<sup>rd</sup> theme for a deal flow fund is the creation of new supply chain management technologies to upgrade Russia's logistics and distribution platforms to international standards (and support the distribution needs of strategic projects like Shtokman for example).
- A 4<sup>th</sup> theme for a deal flow fund is the creation of a domestic auto component supply chain that meets the quality of international automotive suppliers.

3. Deal flow funds pioneer ideas and assist entrepreneurs with the advancement of their concepts into a viable product faster and more cost effectively than ever before. Entrepreneurs spend time building innovative applications instead of searching for start-up capital in a time where the economic environment makes it difficult to raise seed capital.
  - Deal flow funds invest in the earliest stage of SME creation: the development of new technology, to get products/services ready for angel/seed investors. They are structured differently by different investors, but they have three common components and characteristics:
    - Stage #1: Prototype/process creation supports the costs to explore and demonstrate the technical feasibility of scientific concepts with commercial potential. The investment pays the expenses to produce a 1<sup>st</sup> prototype/process or laboratory bench model that demonstrates technical feasibility.
    - Stage #2: Business opportunity assessment defines the business opportunity for the prototype or laboratory bench model resulting in stage #1. The investment is not intended to fund an entire business plan, but a 3-4 page document detailing the technology's commercial potential.
    - Stage #3: 'Proof-of-concept' investment finances the costs of product development, testing & benchmarking technology performance to direct competitive products/services, alternatives or substitutes available to customers. SMEs are only able to approach customers when they clearly present technology strengths and weaknesses, conducted to a comprehensive analysis under different user conditions.
4. **Several Governments executed deal flow funds** similar to the BlackBerry Partners Fund™, the iPhone Fund, and Google's Developers Challenge. These initiatives to deal flow development are very similar to what Research in Motion, Kleiner Perkins and Google did, so an analysis of these government programs do not add new knowledge to IVI's analysis of what the private sector did. Enterprise Ireland is one of the most comprehensive programs to deal flow development and RVC staff can read about what they did at these links with details in the Appendix, pages 40-48:
  - R&D initiatives in Ireland, <http://www.enterprise-ireland.com/ResearchInnovate/R+and+D+in+your+Enterprise>
  - Funding initiatives, from R&D, seed through growth capital including international collaboration, <http://www.enterprise-ireland.com/Grow/Finance/>

#### **Relevance of Deal Flow Funds to RVC & Russia**

1. Deal flow funds focus the time, attention and creative energy of entrepreneurs, SMEs and developers to a single problem, so they more quickly test, reject, develop new ideas and product solutions to customer needs, actions that accelerate the creation and commercialization of new technology - to realize objectives faster and more simply. These actions have another benefit; they reduce technical and commercial risk so angel and seed investors have a better chance to more accurately calculate rate of return on any probable investments.
2. Deal flow funds build the innovation 'ecosystem' in Russia. An ecosystem consists of customers, suppliers, developers, universities, SMEs, service providers and investors, all working together with the common objectives for more knowledge creation. Deal flow funds are an integrated solution make technology 'investment ready' for angel and seed investors. It is a solution to bridge the innovation gap that exists in Russia.

## **Project Objective #2: Solutions to Build the Human Capital Pool of VC Staff in Russia**

### ***Discussion: Issues in Building More & Better VC Investment Officers and Teams in Russia***

Building the investment and operating skills of staff of RVC investee funds (VTB, S Group, Allianz-Rosno, Bioprocess, Maxwell, etc) is one of the most difficult tasks facing RVC. Israel recognized the challenge and necessity of creating and building the investment skills of investee funds if Yozma were to succeed; the failure of INBAL (the predecessor VC fund-of-funds to Yozma, and which resulted in Yozma), was attributed to the lack of professional VC managers in its direct investment funds.

Israeli assured skill transfer to Israeli VC investee fund staff through the compulsory participation of foreign VC firms in Yozma. A senior Partner (10+ years of VC experience) from each US investor spent one week per month in Israel working with their Israeli counterparts; an Israeli partner spent one week working in the offices of their US partner too. Culturally speaking this interaction provided formal and informal education, training and mentoring from the US side to the Israeli partner through the identification of emerging market trends/customer requirements, deal selection, evaluation, investee management, access to markets, recruiting management teams, the raising of capital from unrelated 3<sup>rd</sup> parties and exits through IPOs and corporate investors.

Yozma was successful when investee funds made great investments that were very profitable in 2-3 years. These successes enabled Yozma 1<sup>st</sup> funds to raise new capital and attract new fund entrants into Israeli VC. 1<sup>st</sup> funds must be highly profitable to create the reputation effects that give them the building blocks for future success; the investment record to raise new money, attract partners, and access the best deals, markets, technology, customers & managers to support investee growth. Early funds not highly profitable risk damaging, halting or stopping the development of a VC industry in any country.

For Russia to be successful, Russian technology VC funds must:

1. Access the best deals, whether they come from within Russia or outside Russia (with some connection to Russia).
2. Make a contribution to the development and growth of investee companies, set strategy, raise capital from unrelated 3<sup>rd</sup> parties, access networks of markets/partners, and recruit senior managers to the investee company.
  - Being perceived as a value-added contributor to investees creates access to the best deals.
  - To be effective in setting strategy, the most successful investment managers in technology VC had significant operating experience as entrepreneurs themselves or in engineering, marketing or sales positions in private enterprise.

‘Smart deals’ look for ‘intelligent capital’ and good entrepreneurs in Russia seek investors that can make a contribution to the growth of their enterprise. In Russia the #1 smart fund is Baring Vostok Capital Partners, Moscow. The actions of management from the Russian technology SME Enforta illustrates the challenge that RVC investee funds face in accessing the best deals.

Enforta management invited Sumitomo Corporation (Japan) as their 1<sup>st</sup> investor, then Barings as the 2<sup>nd</sup> due to their excellent investment reputation, unquestioned ethics, deep professionalism and experience in Russian telecomm (1<sup>st</sup> investor in Vimpelcom as one example). The EBRD and the US VC fund Bessemer (oldest VC firm in the US) invested in the latest rounds, even though Bessemer has no

strategic interest in Russia. Enforta did not show their deal to any RVC investee funds, even though these funds have money to invest and actively looking for deals.

Staff in RVC investee funds is dedicated, hard-working, ambitious and well-educated, some with PE experiences, all self-assured. None have invested through the entire VC investment cycle (a 10 year process from raising a blind pool fund, investing in a portfolio of SMEs through liquidation by IPO or sale to a corporate). Achieving a fund IRR of 20%+ net of fees is *the sole test of success, and the measure* that international fund-of-funds, institutional investors and gatekeepers use to determine if a country and its VC industry merit their money, time and attention. Investing over a 10 year cycle develops the deep experience and industry contacts to make contributions to investee growth and the reputation effects to attract the best deals.

The Israeli Government understood these criteria of success from the very beginning, yet they could not wait 10 years for the domestic VC labor pool to develop on its own. So they mandated international participation in Yozma funds to accelerate skill transfer in VC international best practices, from deal generation through liquidation. At times there was strong and intense interpersonal conflict between Israeli staff and partners from the US side; staff were replaced, some moved to different positions or others left the program entirely, outcomes expected and anticipated.

The RVC can't wait 10 years for the Russian VC labor pool to develop on its own either. Yet unlike the Yozma scheme, you can't force your existing funds to include foreign participation as it was not a mandate to win a tender.

Attempting to attract international VC and technology professionals to Russia is one solution for skill transfer, but you cannot rely on it to build the tech and VC labor pool in Russia. Instead, IVI recommends several programs for the RVC to build Russian VC teams and create opportunities for interaction between the Russian side and experienced international deal makers. Building the skills of RVC staff are essential too, especially if the RVC asks Elvira Nabiullina, Ivan Oskolkov and members of the RVC Board of Directors for permission to do direct investing.

### ***Recommendation #1: Educational Programs to Build Professional Capabilities in Russian VC***

1. ***Send RVC investee fund investment officers and RVC staff*** to international educational and VC training programs in the US. The 'best of the best' training programs are 3-5 days in length, heavy on case analysis, learning and training by doing with industry specialists and academics as trainers.

These programs are usually held at a US university where attendees study, eat, and sleep in university dormitories. By studying and living together for 3-5 days, it starts the process of exposing Russian investment offices to best practices in technology VC, but more importantly puts them into the network to start building acquaintances, develop friendships and share information; inputs to skill transfer. By engaging in 'small talk,' 'cocktail conversation,' and informal group studies, RVC forces learning to happen and networks to develop. Over time deals will develop between the more proactive Russians and international funds, expose foreign VCs to Russian potential, to create opportunities for Russian VC funds to help foreign VC investee SMEs to access the Russian market.

Understand and recognize that some Russian staff will resist this training mandate, but insist that they attend at one course per year.

IVI recommends three programs to RVC:

- *The Venture Capital Institute* ([www.vcinstitute.org](http://www.vcinstitute.org)). For 34 years, the Venture Capital Institute (training division, National Association of Small Business Investment Companies [www.nasbic.org](http://www.nasbic.org)), has trained more than 4,200 venture capital professionals in what is viewed as both a 'required course' for new VCs and a continuing professional education program for experienced VCs. The Venture Capital Institute (VCI) is an intense, four-day, in-residence program, conducted by experienced VC managers, investors and attorneys. It combines lectures, case studies, written outlines, and reference materials covering all elements of direct venture investing. The VCI attracts attendees from around the world who benefit not only from the practical knowledge from the program but also from the relationships they form with their peers in VC. VCI programs are developed and coordinated by the NASBIC Education Committee. See Appendix, pages 15-16 for an analysis of the VCI including training topics and cost.
- *The VC Executive Education Program*, U of C Berkeley, Haas School of Business (<http://executive.berkeley.edu/programs/vcep>). The University of California, Berkeley, Venture Capital Executive Program is a five (5) day course for beginning and experienced investors, corporate VC investors, economic policy advisors and entrepreneurs. The Program provides education and training using case studies, panel discussions, electronic data bases research tools, and small sub-group workshops. Learning is accomplished through interaction and engagement with academics and VC industry specialists. Course material includes an overview of the VC industry, trainings in opportunity assessment, valuation, deal structuring, corporate governance, and exiting. The program discusses how large corporations can use VC, working with entrepreneurs and VCs, to further corporate strategy; useful knowledge for Russian VCs and the RVC to attract Russian corporations to VC investing in Russia. See Appendix, pages 16-17 for an analysis of the VC Executive Education Program, U of C Berkeley including training topics and cost.
- *The Corporate Venture Program*, National Venture Capital Association (NVCA, [www.nvca.org](http://www.nvca.org)). The National Venture Capital Association (NVCA) with partners the Radical Innovation Group and Product Genesis hold their 5<sup>th</sup> annual symposium titled 'Entrepreneurship, Innovation and Growth.' This two-day, interactive, symposium explores the challenges driving the importance of cultivating an innovation discipline within corporations and corporate venturing organizations. Representatives from global 500 companies, corporate VC groups, VCs and academia gather to discuss topics.

More corporate VC is required in Russia, by Russian corporations, to develop deal flow and the technology managers required for more VC to happen in Russia.

This program is a way to introduce the benefits of corporate VC to Russian corporations, to multinationals that use corporate VC to achieve strategic, technology and market goals, to learn best practices in corporate VC from corporate VC investors like Intel, Sun, Microsoft, John Deere, 3M, Unilever, Dow Chemical, Shell and Chevron to name a few.

Attracting corporate investors to Russia has other benefits. The venture capital departments of multinationals are especially helpful to scale up the innovation ecosystem in a country. They create leverage in the market like Intel Capital's dedicated \$50 million VC country fund to finance Brazilian technology, and Microsoft's Innovation Centers, stimulating interaction in the infrastructure resulting in more innovation and more Brazilian software startups being funded.

Leadership from the RVC in promoting corporate VC is a solution to expanding the Russian VC market. See Appendix, pages 17-22 for an analysis of the NVCA's Corporate Venture Program (and related educational programs) including training topics and cost.

2. ***Assist the Russian Government to create an educational grant program*** for Russians to attend US or European MBA and Ph.D programs, to build the talent pool of more financial, technology and operating specialists for Russian VC and Russian tech start-ups. Start by supporting Russians that study in the Entrepreneurship, VC & Technology curriculums that Babson College (Boston), MIT (Boston) & Wharton (Philadelphia) specialize in.

RVC might help model an educational grant program to that of the Kazak Government. Since 1993 over 800 Kazaks earned their MBA and Ph.D degrees from US, Canadian & European universities; the Government pays tuition, living and other expenses; graduates work in Government for five years after graduation, [www.kazakhembus.com/systemofeducation.html](http://www.kazakhembus.com/systemofeducation.html) & <http://www.kazakhembus.com/040706.html>.

The RVC can take other tangible and indirect leadership roles in helping to build the human talent pool in Russia. There is a real shortage of qualified Russian IT managers with international business experience; more of these guys are needed to staff Russian tech SMEs with some becoming future entrepreneurs. IBM for example, will provide \$20 million to fund a two-year IT project management course in selected Russian universities, to educate, train and develop future IT project managers. But even with IBM's great resources in Russia, they do not know where, how or whom to start with and how to prevent such a program from getting corrupted in the Russian educational system.

### ***Recommendation #2: Engage International Networks to Accelerate Skill Building***

Engaging international networks is a 2<sup>nd</sup> step to develop the skills of Russian investment officers and venture staff, to create the relationships needed for deal sharing and co-investment opportunities that build new work experiences. Most importantly engaging international networks exposes foreigners to the business and financial opportunities of entering Russia and working with Russians. Here are some projects that RVC can execute with international networks.

1. ***Engage the VC departments of multinationals like IBM, Shell, Nokia, Siemens, Sony, Schlumberger, etc.*** VCs of multinationals add-value in ways that financial VCs can't by taking technology risks, investing VC in the R&D of young SMEs, and directly in IP with technology right-of-use, a structure that accelerates the diffusion of technology to markets and customers.

Working with the VC departments of multinationals educates Russian VCs to the decision making and buying process that international corporations use in selecting promising technologies and new suppliers to support. Corporate VCs provide access to corporate R&D budgets for the funding of technologies at their early stages of development, before financial VCs are able or willing to invest, so engaging these networks is a way for Russian VCs to raise money for Russian technologies still in the R&D stage of development. Large corporations invest in promising technologies, guide its development with customer feedback, speed commercialization and help access opportunities in its supply chain; knowledge that will help Russian VCs add-value to their investee companies.

Implement this recommendation by approaching IBM to re-start the 'Russian Innovation Board,' a 'virtual' organization that brings corporate investors and international VC investors to investigate Russian technology possibilities with the Russian Academy of Sciences (RAS). See Appendix, beginning page 52 for details (in Russian).

- Work with IBM update the strategic plan of the Innovation Board; make it real with funding and RVC staff to execute. Aggressively market the Innovation Board to multinationals with engineering centers in Russia, (IBM, Boeing, Samsung, Intel, Motorola, Cadence, Baker-Hughes, Schlumberger, LG, Google, etc.), to join and support it with technology sharing and deal making in their home country, and with their internal VC, M&A and corporate development departments.

2. ***Participate and attend international business plan and technology transfer/development competitions*** so Russian VCs can learn how international VCs evaluate opportunities, how they make judgments on technology and management teams, how they decide which deals to finance and which one to reject. Participation integrates Russian VC investee fund into international networks and builds relationships between the Russian and foreign side for deal sharing and skill building.

There are hundreds of business plan competitions held worldwide; the ‘best of the best’ include:

- Europe: E-Unlimited, Brussels, ([www.e-unlimited.com](http://www.e-unlimited.com)). Operating for 10 years, SMEs in their events have raised US\$2 billion from European/US VCs & corporate investors.
- USA: AlwaysOn, San Francisco, started by Tony Perkins, founder of Red Herring, his track record speaks for itself (<http://alwayson.goingon.com/homepage>).
- USA: New Mexico Information Technology & Software Association, <http://www.nmitsa.org>
- USA: TechConnect, Cambridge, MA, (<http://www.techconnect.org/Summit2009>)
- USA: Stanford University’s Global Entrepreneurial Challenge & Stanford Business Association for Entrepreneurship, <http://bases.stanford.edu>
- USA: University of California, Berkeley, VC & Business Plan Competition, [http://entrepreneurship.berkeley.edu/business\\_competitions](http://entrepreneurship.berkeley.edu/business_competitions)

Another skill building initiative is to contract one of these firms to organize business plan competitions of Russian seed/early stage SMEs for Russian, US and European investors. Competitions expose Russian VCs, SMEs and developers to international VC decision-making so they can learn how and where to improve their business models to global competitors.

3. ***Organize ‘Master Classes,’ to connect US, European and Asian entrepreneur networks*** with Russian networks of entrepreneurs, employees, shareholders & VCs on company creation, idea generation, product development, scaling up the business, etc. An example of a Master Class that demonstrates skill transfer from experienced entrepreneurs to beginning entrepreneurs/VC staff.
- Silicon Valley start-up, HotOrNot.com. To bootstrap his start-up, HotOrNot.com, James Hong had to go to extreme measures, including borrowing (stealing) Internet bandwidth from UC Berkeley and hosting services from Yahoo Inc. But that kind of resourceful attitude is necessary for an entrepreneur to survive and succeed, according to Hong, who dispensed advice on bootstrapping and revenue models at Startup2Startup, an event in Palo Alto, Calif.
  - Hong’s HotOrNot.com, launched in 2000, became an Internet sensation, providing an early example of viral marketing and online advertising revenue. The company never took any funding and was sold in 2008 to Avid Life Media for \$20 million.

- Hong and his partner Jim Young launched the site in October 2000; people post photos of themselves and rate others on a scale of 1 to 10. After sending an email to 40 friends to announce the launch, it had 40,000 visitors in one day. Eight days later, it had 2 million page views.
  - Hong emphasized that it is important for entrepreneurs to spend as little money as possible. He ran the company out of his living room for four years, by which time the company was generating about \$4 million/year in sales, almost all of which was profit.
  - To save money on bandwidth, Hong and Young stole Internet access from UC Berkeley, where Young was a graduate student. The pair hid a computer server under a desk and piled books around it. Eventually they got caught and had to find bandwidth elsewhere.
  - Later the pair signed favorable deals with hosting company Rackspace Hosting Inc., convincing the company that HotOrNot would be the perfect test case to show that Rackspace could scale a Web site to large proportions. "HotOrNot never paid for a machine or for bandwidth for its first year," Hong said.
4. **Join the TIE (<http://www.tie.org>) network, the largest non-profit global** network of entrepreneurs and professionals, established to grow entrepreneurship and nurture entrepreneurs all over the world. Start a TIE chapter in Moscow. TIE has 49 chapters in 11 countries, 12,000+ members and 1,800 charter members including entrepreneurs, VC/PE investors, angel investors, lawyers, technologists and management professionals. Engage this network to build more Russian skills in entrepreneurship, to network with global entrepreneurs, their investors and support service companies, all useful contacts for Russian VCs to make a contribution to their investee companies.

See Appendix, pages 23-25 for detailed analysis of TIE.

***Recommendation #3: Build Networks to Develop Russia's Need for Better Trained Specialist & Attract International Talent to the Country***

A VC industry achieves sustainability with the talent for growth only if new scientific-technological innovations & business opportunities are created continuously. Deal flow funds develop tech talent, and so do development centers. Singapore's technology hub Biopolis is a model for RVC to visit (<http://www.signonsandiego.com/news/business/biotech/20061218-9999-lz1n18sing.html#>). With over \$1 billion invested since 2000, it conducts research in human health, stem cell and biotechnology.

Tech hubs attract diaspora, and build new technology teams with leading scientists and researchers. Singaporean expats and international specialists moved to Singapore to work at Biopolis, to conduct stem cell research including American stem cell pioneer Roger Pedersen, Edison Liu, an American scientist who left the U.S. National Cancer Institute, UC San Diego's former medical school dean, Edward Holmes and his wife, Judith Swain, a cellular cardiologist, the husband-and-wife team of Neal Copeland and Nancy Jenkins, top embryonic stem cell researchers from the NIH's National Cancer Institute and Alan Colman, the British scientist who was part of the team that cloned Dolly the sheep.

Actions RVC can take build its human capital network:

1. **Build cross-national networks of Russians living abroad** through an Internet portal, to inform them of the business, economic, financial, technology and VC opportunities in Russia.



- Target Russians whom immigrated to the US, Europe and Israel for inclusion in the database as they are potential ‘transfer agents’ of the VC/entrepreneurial mind-set to Russia.
- Market the portal to Russians attending the MBA programs in US and European universities like Harvard, INSEAD, IMD, Wharton, MIT, Michigan, Duke, Chicago, etc., including alumni & Russians attending executive MBA programs. These students are well-educated, bilingual, high achievers with the international business experience/education needed in Russian VC.
- Model the portal to this EU initiative ([http://cordis.europa.eu/eralink/about\\_en.html](http://cordis.europa.eu/eralink/about_en.html)). It is a networking tool for European researchers; it provides information about research in Europe, opportunities for research funding, for international collaboration and for moving across borders.
- In the 1960’s only 16% of Korean scientists and engineers with Ph.Ds from the US returned to South Korea. In the 1980s, the number had jumped to about two-thirds. Korea’s success in integrating Korean diaspora into cross-national networks of professionals overseas and linking them with Korea vs. simply trying to physically attract technical talent from abroad demonstrates the validity of cross-national networks.

Mr. Nastas recommends two other strategies to integrate Russian diaspora and others into RVC’s network.

2. **Establish an RVC office in key US, European and Asian VC cities**, as the voice of Russia, to share information, access deals and promote them, for building network with developers, VCs, entrepreneurs, Russian expats and others with interest to invest in cross-border and Russia. This office is a key element in engaging international networks, to stimulate collective learning.
  - Israel had a 20 year program of technology links with the US, Asia and Europe through the BIRD program and Israelis living in these countries. These links created access to markets, partners, investors, deal flow and staff to start new SMEs.
  - This office seeks and encourages foreign investment in Russian SMEs/technologies, even when Russian money is available or local valuations are higher. The more international links RVC creates the better, as RVC becomes stakeholder in the international VC community vs. simply being an observer, to institutionalize the RVC into global VC networks.
3. **Create a RVC media company that publishes** statistics on happenings in Russian VC, in the international media, on deals, companies and funds. Publishing activities stimulates networking, collective learning and word of mouth conversation between foreigners & Russians.
  - Create a weekly news/internet show, format based on Russia Today, to promote Russian tech & entrepreneurial successes, tech, research, market and business opportunities.

Taiwan’s Hsinchu Park (<http://eweb.sipa.gov.tw/en/index.jsp>) is one of the best role models in demonstrating the results that a foreign office can achieve with a media program to support the local office. Its San Francisco office identifies market trends, networks with SMEs, corporations, VCs, entrepreneurs, managers, etc., and attracts Taiwanese expats to Taiwan. Results? The Park is a tech cluster with over 45 telecomm and 45 optoelectronics firms, 50 computer & peripheral companies, 116 integrated circuit companies, with 3,000 expat engineers, total employment of 75,000, 11,000 with MS/Ph.D degrees.

## **Additional Recommendations to RVC**

### ***Recommendation #1: Build Networks with these Companies from Asia, Europe & the US***

Tom Nastas evaluated the programs of companies, governments and non-profits, those working to build knowledge based economies and technology based VC industries in Asia, Europe and the US. He recommends that the RVC contact each organization and to network with them, to discuss ways that RVC and each organization can work together, to share information, to learn from one another, to think about programs or ideas that might be transferred from them to Russia, and joint programs that they might work on together. Networking is valuable and beneficial to the RVC as it works to grow its program in Russia, and build networks with international groups.

Summaries of these groups are provided in the Appendix of this report, pages 1-52. For detailed information on each group, view their web site.

1. USA: TIE, [www.tie.org](http://www.tie.org), Appendix, pages 23-25.
2. USA: National Association of Small Business Investment Companies, [www.nasbic.org](http://www.nasbic.org), Appendix, pages 1-7 & 25.
3. USA: Google, (Google Android Developers Challenge), [http://www.google.com/intl/en/press/pressrel/20071112\\_android\\_challenge.html](http://www.google.com/intl/en/press/pressrel/20071112_android_challenge.html) Appendix, pages 11-13.
4. USA: Kleiner, Perkins, Caufield & Byers (iPhone Fund), <http://www.kpcb.com/initiatives/ifund/index.html>, Appendix, pages 10-11
5. Canada, Research in Motion (Blackberry Fund), <http://www.blackberrypartnersfund.com>, Appendix, pages 8-10.
6. Singapore: Singapore Development Board, [http://www.edb.gov.sg/edb/sg/en\\_uk/index.html](http://www.edb.gov.sg/edb/sg/en_uk/index.html), Appendix, pages 26-27.
7. Taiwan: Hsinchu Science Park, <http://eweb.sipa.gov.tw/en/index.jsp>, Appendix, pages 27-34.
8. England: Technology Strategy Board, <http://www.innovateuk.org>, Appendix, pages 34-36.
9. England: NESTA, [www.nesta.org.uk](http://www.nesta.org.uk), Appendix, pages 36-40.
10. Ireland: Enterprise Ireland, <http://www.enterprise-ireland.com>, Appendix, pages 40-48.
11. Luxembourg: European Investment Fund, <http://www.eif.org>, Appendix, pages 48-50.
12. Belgium: Europe Unlimited, <http://e-unlimited.com>, Appendix, pages 50-52.

### ***Recommendation #2: Meet with these Firms; RVC Business Trip to the USA, November 2008***

1. TIE, California, <http://www.tie.org>, call Suren G. Dutia, CEO, telephone, 1 408 567 0700.

2. AlwaysOn, California, <http://alwayson.goingon.com/homepage>, call Matt Bowman, telephone 1 415-595-3487.
3. IBM, New York, call Jurij Paraszczak, telephone 1.914.784.7098.
4. New Mexico Information Technology & Software Association, New Mexico, <http://www.nmitsa.org>, call Randy Burge, NMITSA President, telephone 505-984-0622, mobile: 505-204-4939.
5. TechConnect, Cambridge, MA, <http://www.techconnect.org/Summit2009>, call Jennifer Rocha, Strategic Development Manager, telephone 774 249-8514.
6. NASBIC (Washington D.C.) & SBICs in California. List of SBIC firms at this link, <https://ssl.whoglue.net/nasbic/search/default2.cfm?showSearchForm=yes>. Call Mr. Brett Palmer, President, [bpalmer@nasbic.org](mailto:bpalmer@nasbic.org), tel. # is 1.202.628.5055.
7. Stanford University's Global Entrepreneurial Challenge & Stanford Business Association for Entrepreneurship, <http://bases.stanford.edu>, e-mail only to David Tran, [davetran@stanford.edu](mailto:davetran@stanford.edu).
8. University of California, Berkeley, VC & Business Plan Competition, [http://entrepreneurship.berkeley.edu/business\\_competitions](http://entrepreneurship.berkeley.edu/business_competitions), call Jerome S. Engel, Executive Director, [engel@haas.berkeley.edu](mailto:engel@haas.berkeley.edu), telephone 1 510 642-4255.
9. Google, (Google Android Developers Challenge), [http://www.google.com/intl/en/press/pressrel/20071112\\_android\\_challenge.html](http://www.google.com/intl/en/press/pressrel/20071112_android_challenge.html), call Sergei Brin, founder, [sergey@google.com](mailto:sergey@google.com), telephone 1 650.318.0200, ext., 1002.
10. Kleiner, Perkins, Caufield & Byers (iPhone Fund), <http://www.kpcb.com/initiatives/ifund/index.html>, call Matt Murphy, General Partner, [mattm@kpcb.com](mailto:mattm@kpcb.com), telephone 1 650.233.2750.