

Financing energy efficiency in multi-apartment buildings in Estonia

Lauri Suu

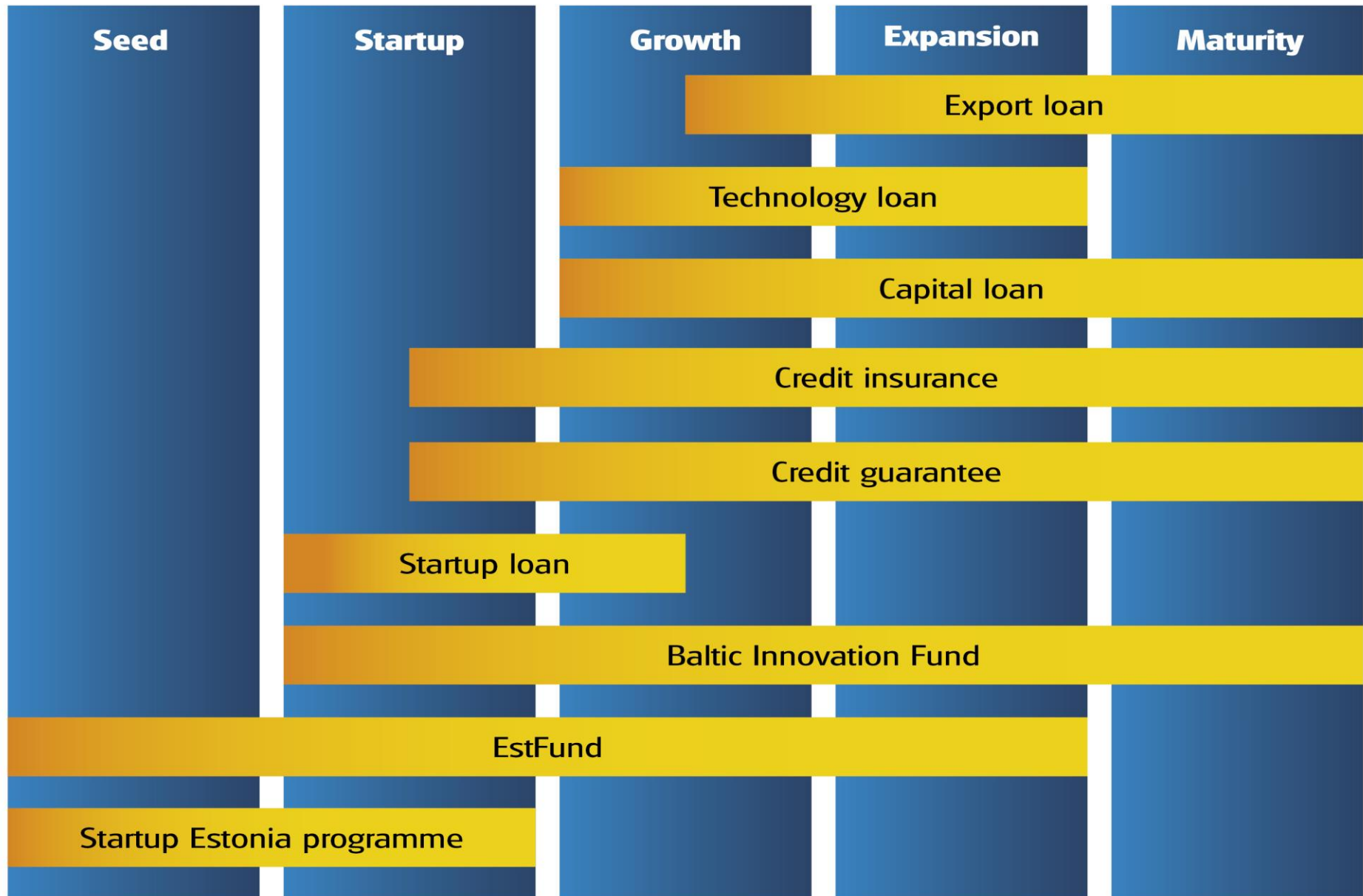


Fund KredEx



- Founded in 2001
- Under the jurisdiction of the Ministry of Economic Affairs and Communications
- Enterprise division (focusing only financial instruments)
- Housing and Energy Efficiency Division
 - Apartment Loan Guarantee
 - Housing Loan Guarantee
 - Reconstruction Grant for apartment buildings
 - Other specific grants for private persons and local municipalities

Services for companies in different stages



Housing and Energy Efficiency Division

- Apartment Loan Guarantee
 - who has higher risk (debtors, rural area, low market value)
 - when reconstruction cost per m² is higher (complex reconstruction)
 - the guarantee amount for apartment building is up to 80% of the loan amount. No collaterals needed. Guarantee fee 1,2-1,7%
 - can be applied via banks
- Housing Loan Guarantee
 - young families
 - young specialists
 - for purchasing or renovating energy-efficient home
- Reconstruction Grant
- Other specific grants for private persons

Housing stock

- ~95% housing stock is in private ownership:
 - ~60% of the housing stock has been built in 1960-1990
 - ~30% before 1960
- ~75% population living in multi-apartment buildings
- ca 20 000 apartment buildings, (ca 500 – complex renovation)
- Legal entity – from 2018 all Apartment Associations (non-profit association to manage building and plot; apartments are privately owned)



Why renovate?

- Rebuilding and reshaping these housing estates is a very difficult task
 - Privately owned
 - Complex renovation is ca 5x times cheaper than building new houses
- No social stratification (yet?), residents are satisfied – social networks, place attachment etc
- Complex renovation is needed due to deterioration
- ~40% energy is used by buildings - big energysaving potential, EU directives, state plans

Holistic approach

- Awareness raising (TV, campaigns, seminars, infomaterial etc.)
- Technical studies (universities)
- Best Practice Projects
- Legal Framework
- Financial measures (low interest rate loans, grants – depending on the market situation)



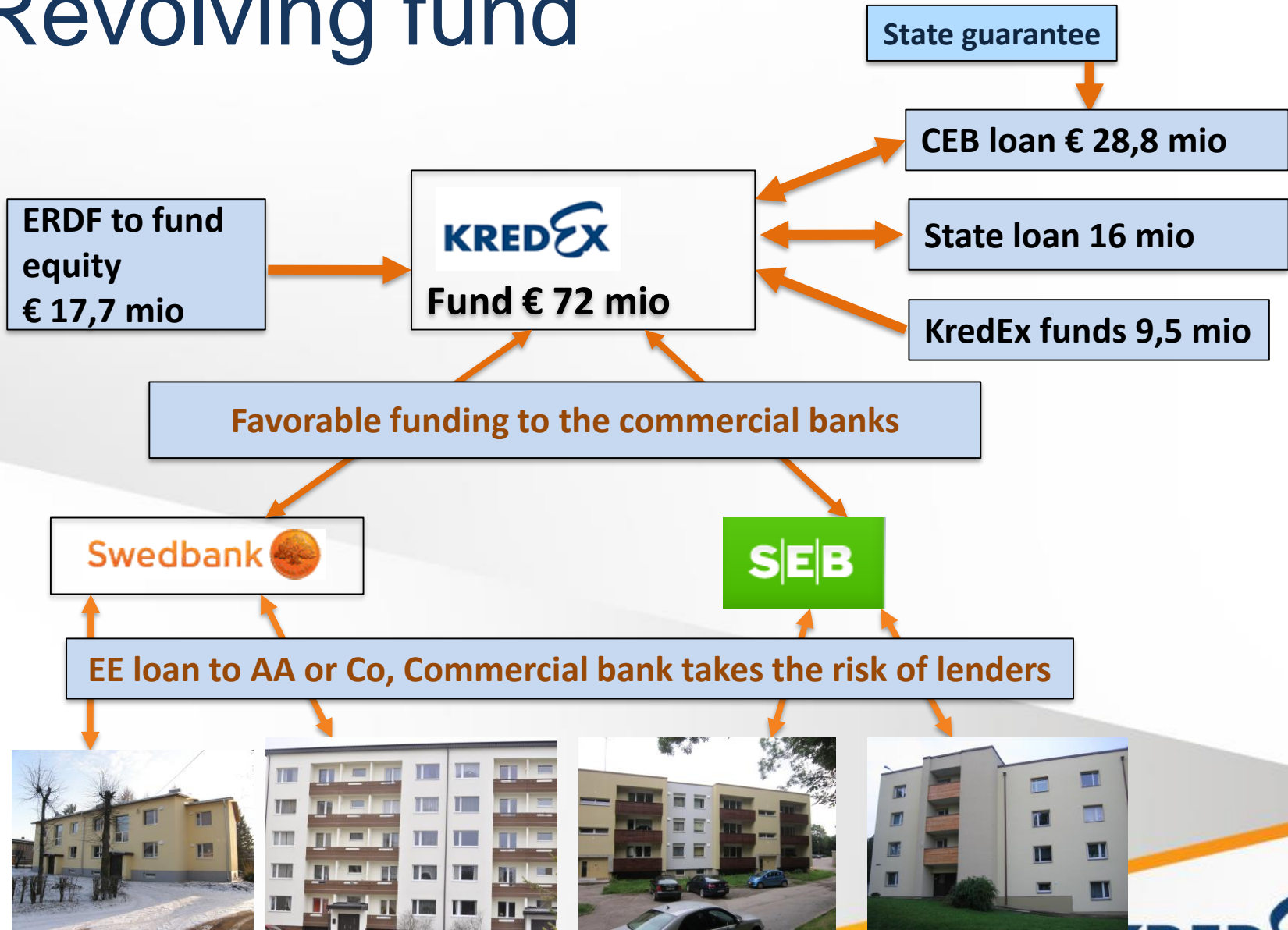
Grant scheme 2003-2007

- For energy audits, building design docs and technical expertise, 50% of the costs
 - Supported ca 4 000 buildings, 1,8 mio €
- For renovation, 10% of the costs
 - Supported ca 3 200 buildings, 11 mio €
- Problems:
 - Insufficient funding (loan with attractive conditions was needed)
 - Single works (low energysaving rates, low renovation quality)
 - No emphasis on the indoor climate

From grants to revolving fund 2009-2014

- Revolving character (re-usage of the funds)
- Funds stay in state
- Leverage effect (1/3 ERDF, 2/3 additional funds)
- Grant scheme (2003-2007, €11 mio, 10% insufficient, not complex approach possible) *versus* loan scheme
- Loan is needed for reconstruction anyway
- Opportunity also to smaller buildings
- Easier to administer, lower administrative costs
- End-beneficiary is used to take loan

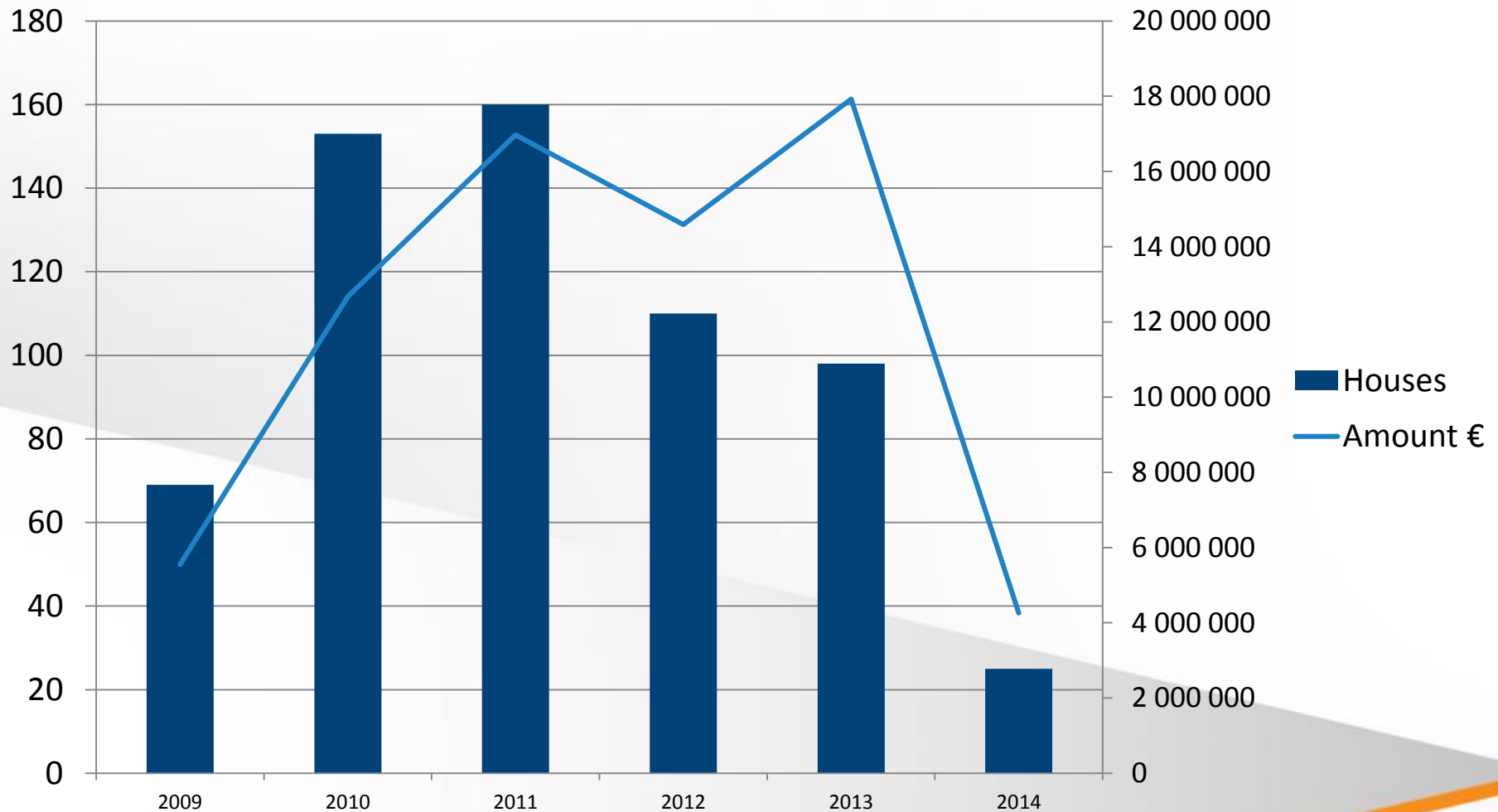
Revolving fund



Conditions for end-beneficiaries

- Multi-apartment buildings: at least 3 apartments
- Main purpose - energy efficiency (at least 20% energy saving for the buildings up to 2000 m² or 30% for bigger buildings)
- Self-financing 15% (grant or own funds or loan)
- Energy audit is obligatory, renovation according to energy audit
- Supervisory is obligatory
- Loan maturity: up to 20 years
- Interest: from 2014 ~ 3,5%, before up to 4,5% fixed for 10 years, average 4%
- No collateral is needed, credit against cash flow
- Decision by buildings: at least 50% +1 one owner at general assemble, decision with simple majority

615 houses, 72 mio €, avg 15 y.



Grant scheme 2010-2014

- Funds for the grant from Green Investment Scheme (selling AAU)
 - An **Assigned Amount Unit** (AAU) is a tradable 'Kyoto unit' or 'carbon credit' representing an allowance to emit greenhouse gases comprising one metric tons of carbon dioxide equivalents calculated using their Global Warming Potential
- In total 37,7 million € ~ 150 million € for investment (663 houses)
- Goal was to renovate multi-apartment buildings completely, to achieve:
 - energy saving from heating costs + indoor climate
 - achieve higher energy class
 - to increase the use of renewable energy

Grant 15, 25 or 35%

- 15%
 - fulfill the terms for renovation loan,
 - energy saving 20 or 30%, according to the size of the building
 - energy label E, energy consumption $< 250 \text{ kWh/m}^2$
- 25%
 - roof, facade, windows (U 1,1) heating system,
 - energy saving at least 40%
 - energy label D, energy consumption $< 200 \text{ kWh/m}^2$
- 35%
 - roof, facade, windows (U 1,1) heating system, heat-recovery ventilation system,
 - energy saving at least 50%
 - energy label C, energy consumption $< 150 \text{ kWh/m}^2$

Results

- 30.09.2010 – 31.03.2014 (with some pauses)
- 661 houses, 24000 ap., ca 55000 inhabitants, 1,7 mio m2
 - 15%, 275 houses
 - 25%, 181 houses
 - 35%, 205 houses (complex renovation)
- Expected avg saving ca 40% (ca 75 GWh per year)
- Ca 15 000 tCO2 per year

Remarks:

A bit too optimistic calculations by energyaudits

First years savings are lower, still problems with ventilation

Apartment Associations need more technical help

More emphasis needed on technical side (better building design docs)

Grants 2014-2020

- No need for state-loan (private banks have resources, well capitalized, good interest rates)
- 102 mio €, grants 15, 25, 40%, 50% for documents, technical consultants, supervision
- Applying process through KredEx, same docs, more emphasis on preparation and indoor climate
- More bureaucratic applying process (SF)
 - More complex building design documents (energy efficiency calculation)
 - Expertise for building design documents
 - Compulsory technical consultants
 - Measurements protocols of ventilation and heating systems
 - Agreements for post-maintenance
 - Measured energy label
- Guarantees are still in force

Preparation for 2014-2020

- Ex Ante was needed, but done partly (no FI)
- Conclusions:
 - No market failure regarding loan opportunities
 - Biggest problem is asymmetry of information, low awareness and non-willigness and inability to take long-term commitments
 - No good alternatives to the grant
 - Grant is to compensate the lack of cost-benefit
 - The goals of directive 2012/27/EU are rather high and to fufill these requiremets effective and quick-acting measures must be implemented.
 - Guarantees by KredEx are inforce and extra guarantees are not needed
 - 1 mio project-32% taxes and 17 new jobs

Results so far

- 2015 apr – 2017 sept, last payments ca 2019 apr – 4 years
- Ca 400 applicants (ca 90% applying 40% grant-complex renovation)
- 110 finished, 125 have decisions, 125 in expertise, ca 40 in que
- Avg investments 270 €/m² (grant 100 €/m²)
- Avg 40 ap, 2600 m², total ca 15 500 ap, 1,03 mio m²



2003-2007

Loan (private banks): 8+%,
short maturity, insufficient
funds

Grant: 10% (11 mio)

2009-2014

Loan (revolving fund): fix.
~4% for 10y, 20y maturity,
sufficient funds

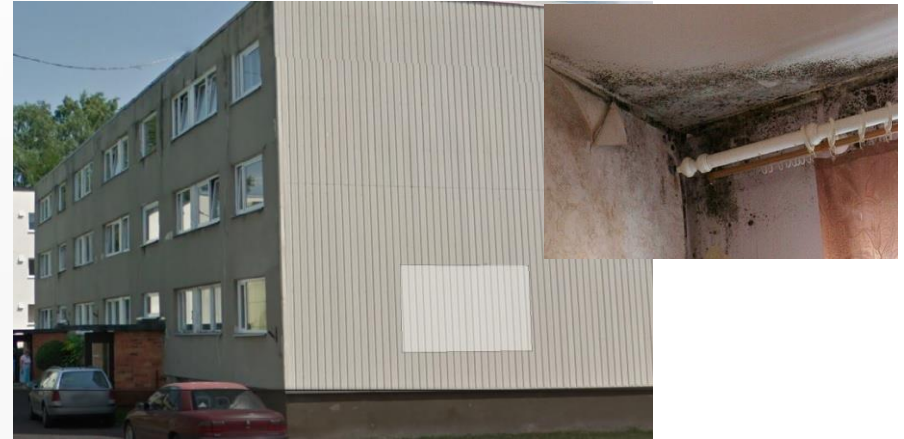
Grant: 15, 25 or 35% (38 mio)

2015-2020

Loan (private banks): fix.
~2,5% for 5y, 15-20y maturity,
sufficient funds

Grant: 15, 25 or 40% (102 mio)

Complexity, quality of renovation and energy saving rate



Thank you!

Lauri Suu

KredEx

Hobujaama 4

10151 Tallinn, Estonia

Tel: +372 6674 111

Fax: +372 6674 101

E-mail: lauri.suu@kredex.ee

www.kredex.ee

