D3.2 Framework for Upgrading the SRI of Existing Buildings

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WP3.3 V0.3 Public

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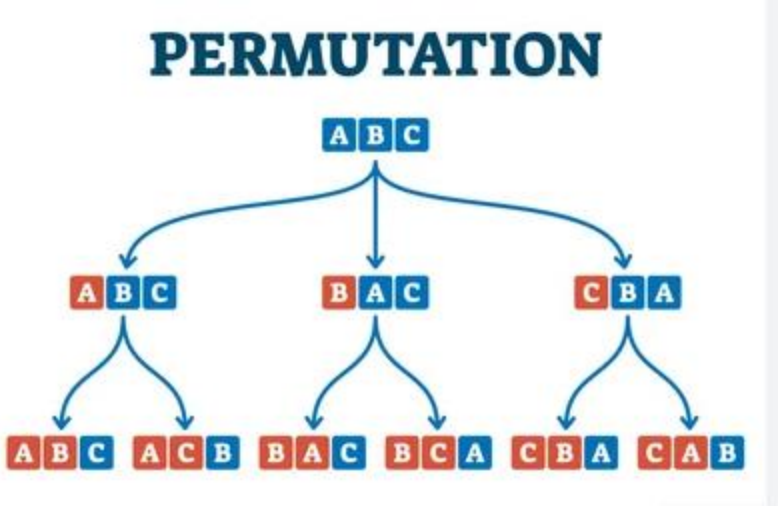
Method for applying SRI Upgrades

- 8 Frameworks applied to heritage, apartment, and single-family home common in Limerick
- Prices are based on advertised equipment which prices and services may vary depending on availability and specifications of the equipment
- All iterations exclude installation costs
- SRI tool Version 4.4 is used to calculate the impact of smart services on building
- Certain domains and services are omitted based on geographic location and building schematics
- Large Commercial buildings are omitted as the broad range of smart services applicable creates to many variations to suit the scope of this deliverable
- SRI grades from V4.4 are experimental and do no substitute compliance with official SRI surveys that may be applied in the future

- Note – for further context on the Smart Readiness Indicator, please see WP3-D1 Review of the SRI on smartlablimerick.ie

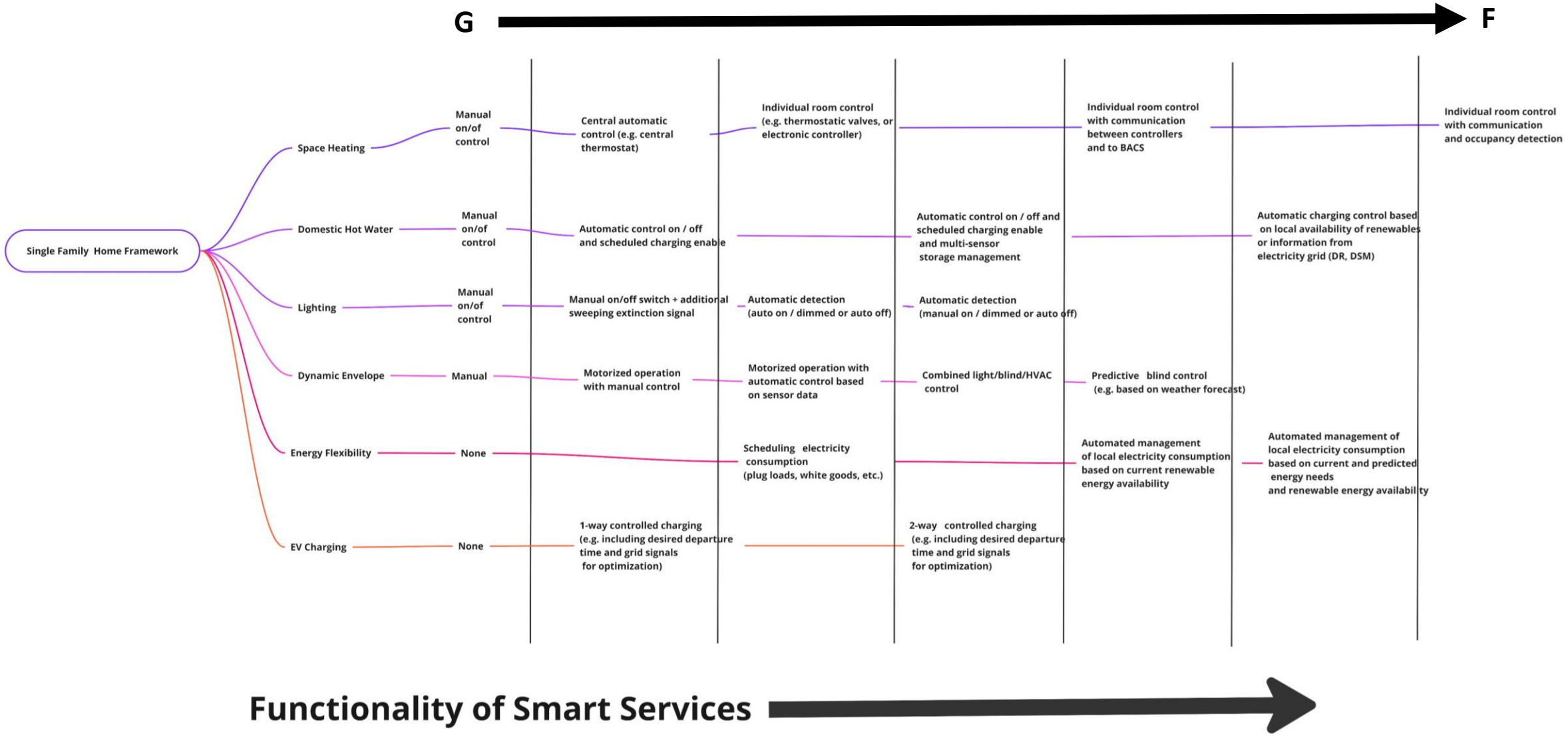
Commercial Buildings and D3.2

SRI has 53 services with an average of 4 functionalities per service resulting in millions of permutations. Commercial buildings can conceivably have 54+ services with variations of these services across the large floor areas and multiple floors.

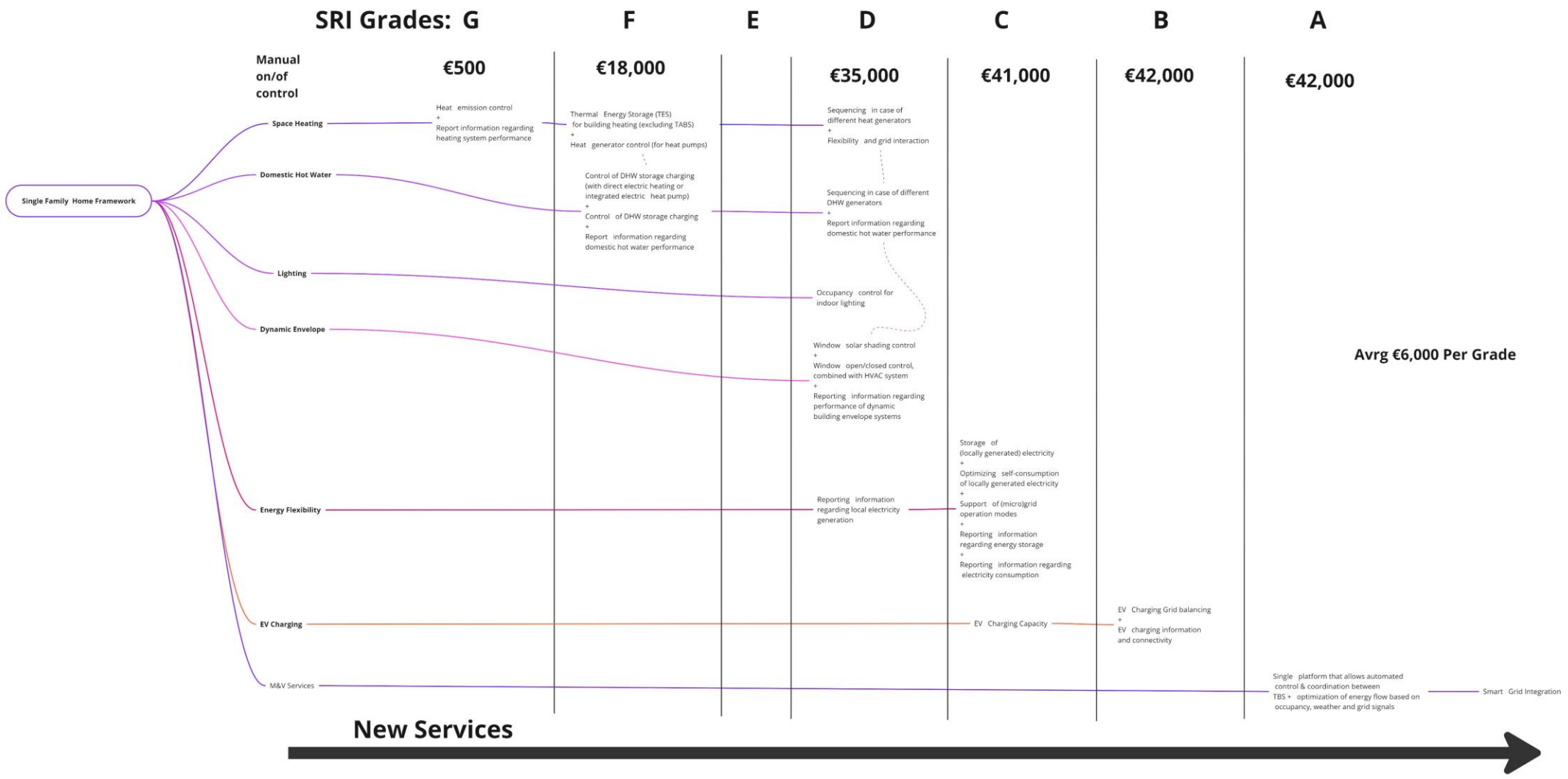


Given the complexity, any commercial building taking part in SMARTLABwill need a bespoke approach to the SRI

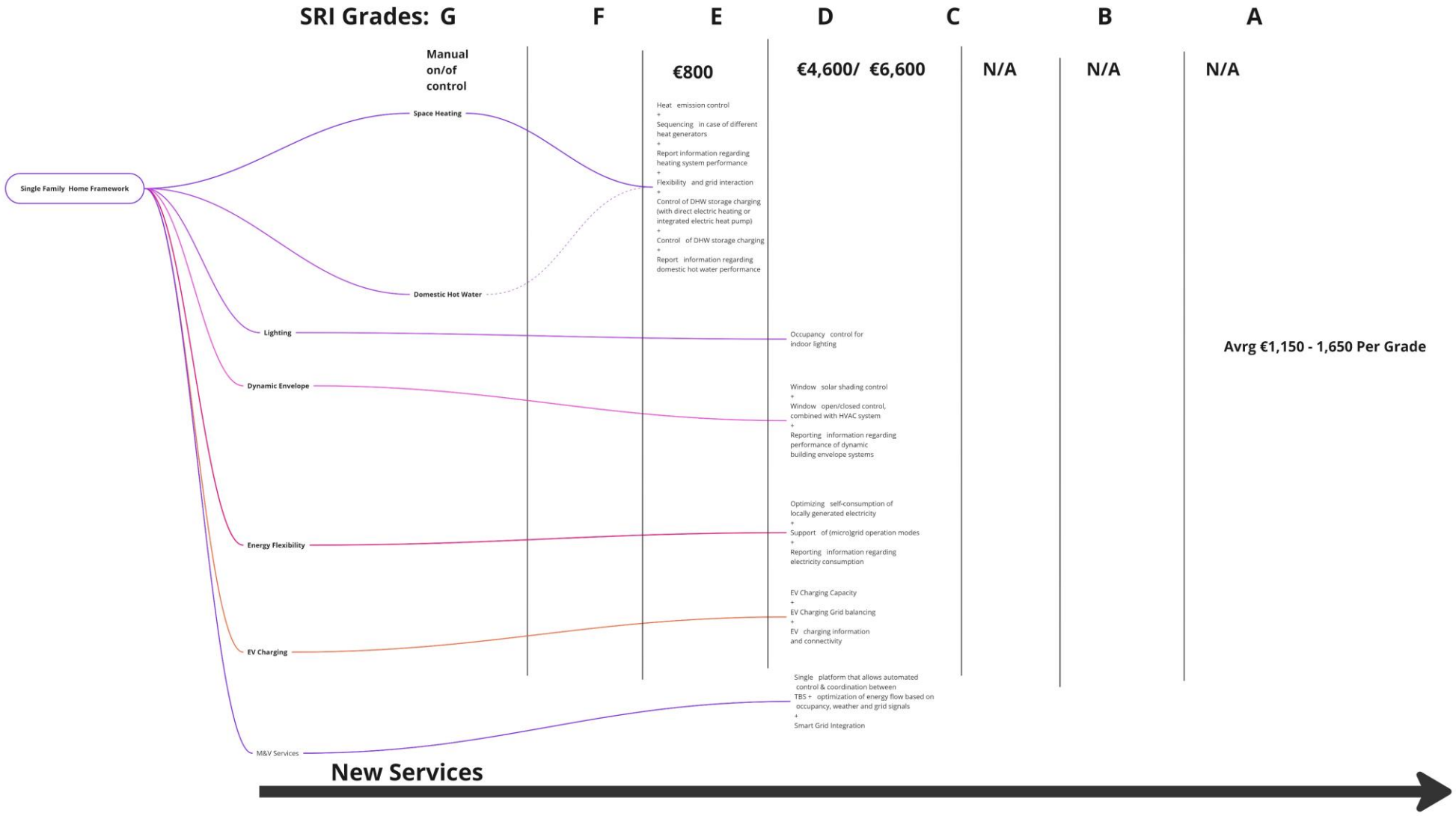
Example of improved functionality from 6 random services



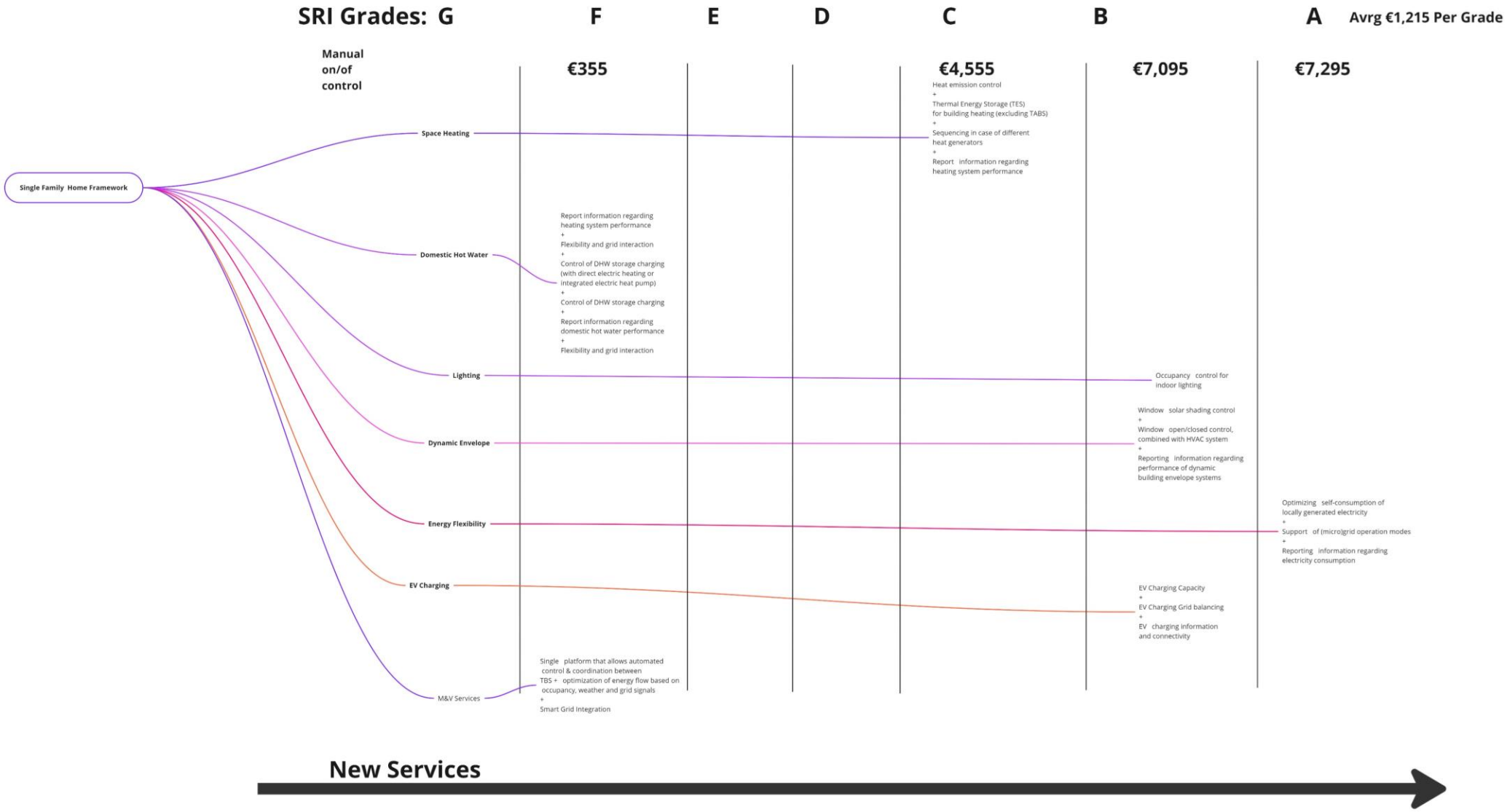
Road Map to SRI A Grade – Single Family Home Greenfield Site



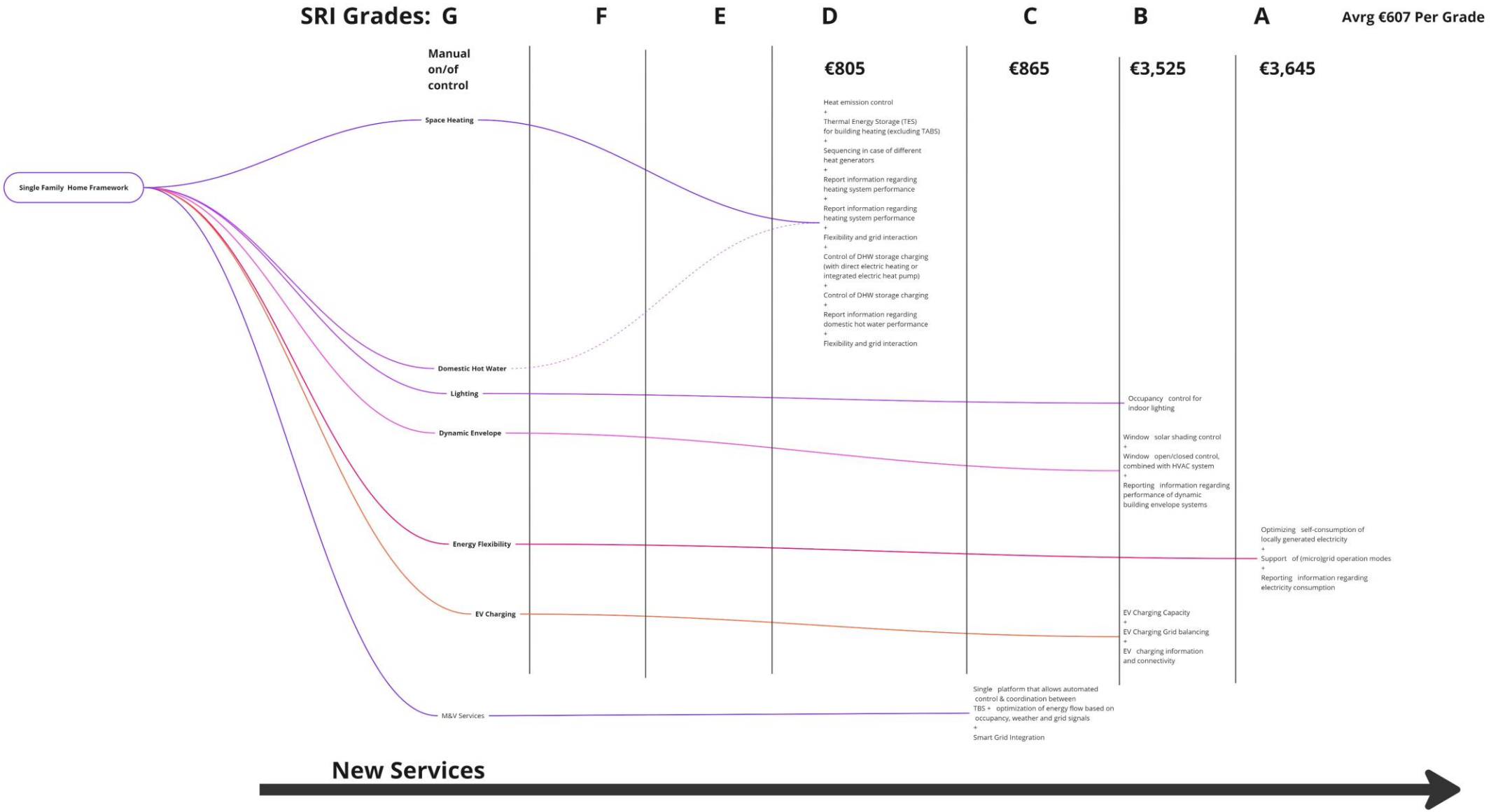
Update Existing Without Replacing Systems – SFH (Shallow)



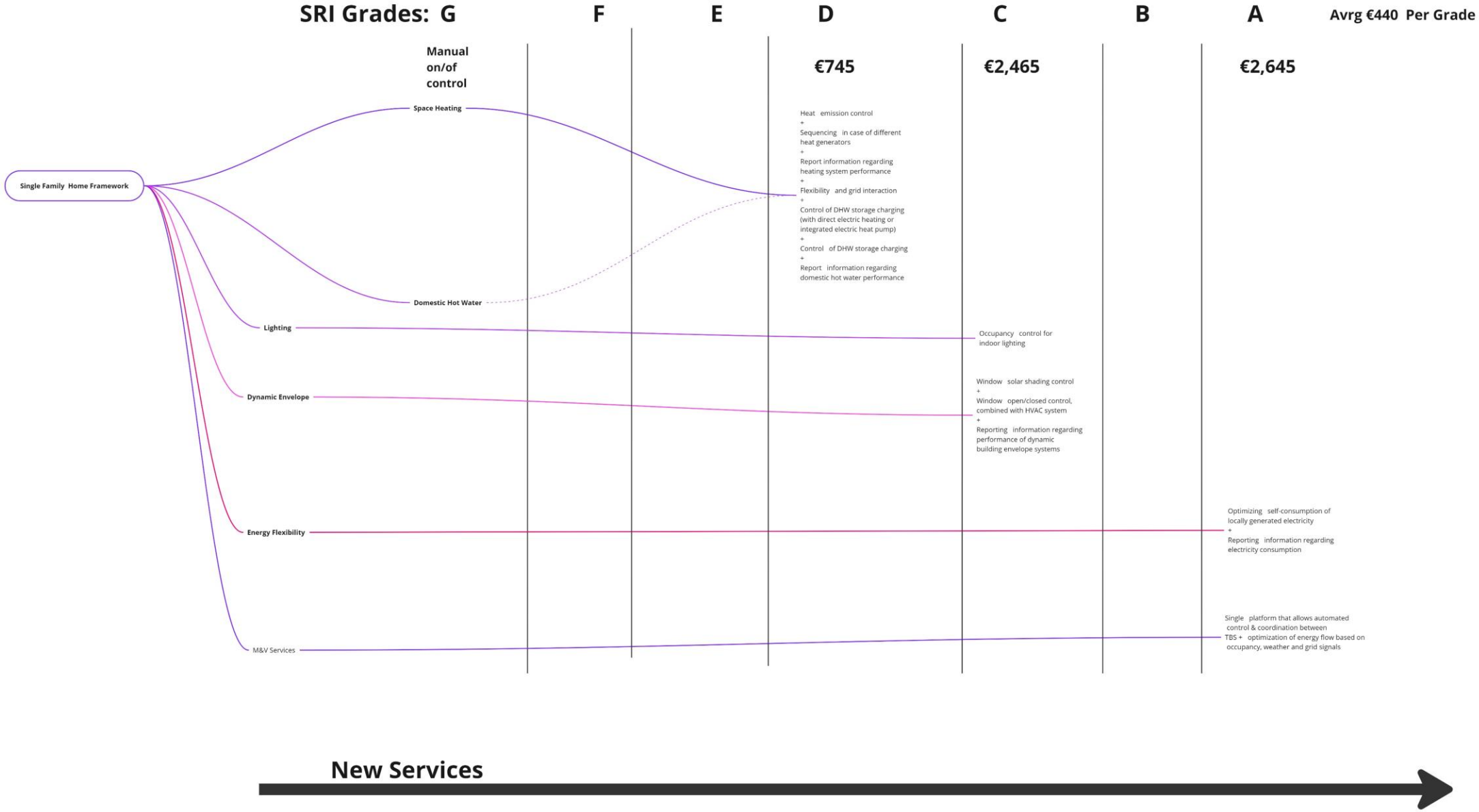
Single Family Home With Old Electric Storage Heaters Upgrades Heritage and Contemporary



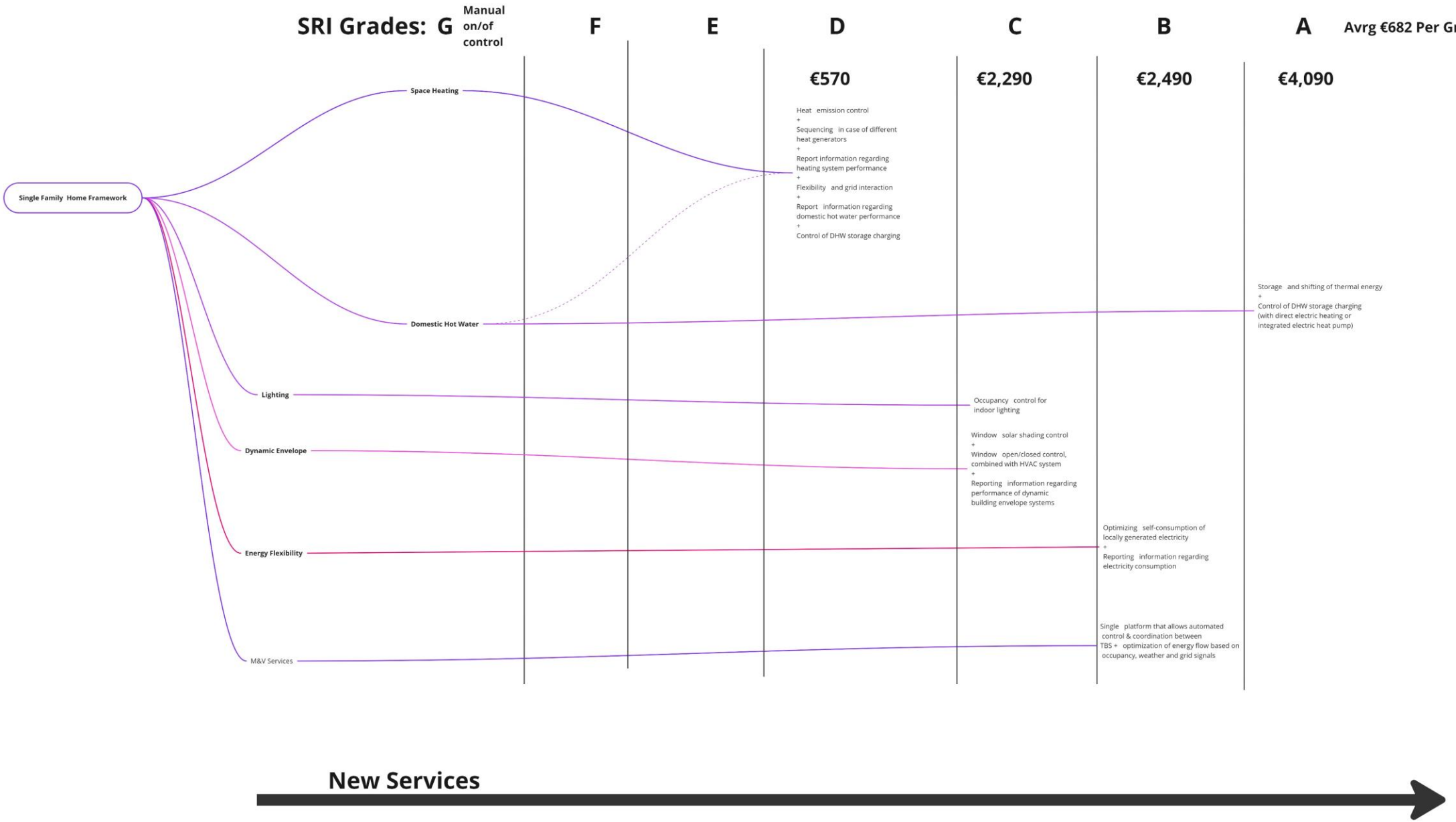
Single Family Home With Existing Radiator/ HW tank/ Boiler Combo



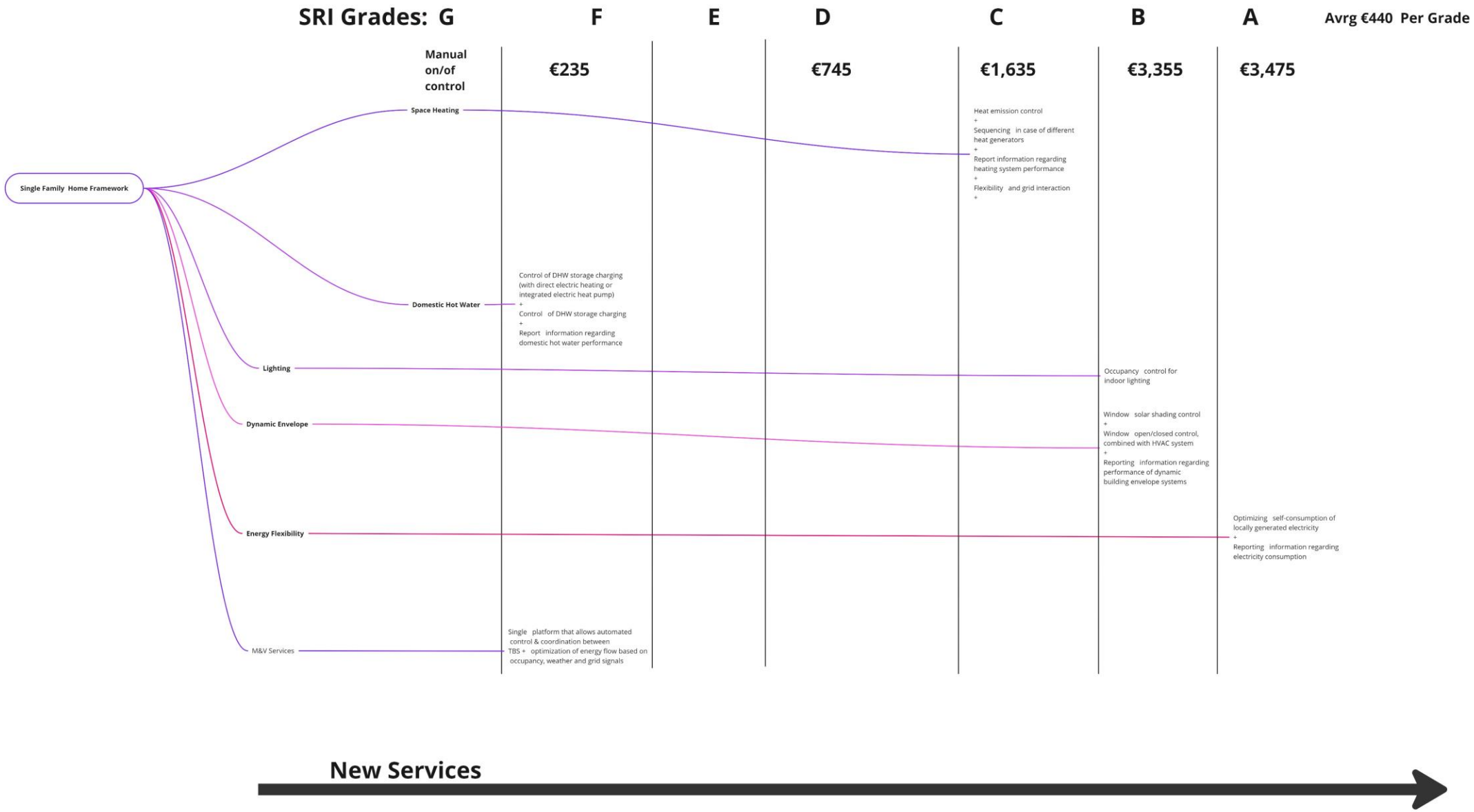
Apartment with New Electric Storage Heaters and Electric Emersion DHW Tank Heritage and Contemporary



Apartment with Gas Combi Boiler and Electric Services



Apartment with Old Electric Storage Heaters



Smart Technology Applied to Buildings to Estimate Costs

Service	Type	General Cost	Name	Ref
DHW	Smart Storage HW	€ 175.00	Tesla Wifi Emersion	https://www.plumbingproducts.ie/cylinder-accessories-ireland/5927-tesla-wifi-immersion-thermostat-t-smart-immersion-heater-not-included.html
DHW	Smart Storage HW	€ 1,620.00	Mixergy Smart Tank	https://theintergasshop.co.uk/hot-water-cylinders/1590-mixergy-180-litre-indirect-unvented-smart-hot-water-tank-mx-180-ind-581.html
Space Heating	Smart Heating HUB	€ 570.00	Smart Heating Tado With thermostats and BACs	tado° Wired Smart Thermostat Starter Kit V3+ The Smart Thermostat Gives You Full Control Over Your Heating From Anywhere, Save Energy, Easy DIY Installation, Works With Amazon Alexa, Siri, and Google : Amazon.co.uk: DIY & Tools
Space Heating	Storage Heater for Elect Building	€ 350.00	one storage heater with Wifi (5.5 - 20 m²) x1	https://www.electricradiatorsdirect.ie/haverland-smart-wave-electric-radiators-white/
Lighting	Smart Lighting Occupancy Detection	€ 180.00	Srecessed Motion Sensors	https://www.amazon.co.uk/Recessed-Ceiling-Meeting-Bathroom-Bedroom/dp/B0BC47DKFS/ref=sr_1_13?crid=2WYO890RFYUEE&keywords=motion+sensor+lights+indoor&qid=1679479328&rnid=213077031&s=lighting&sprefix=motion+sensor+lights+indoor%2Caps%2C69&sr=1-13
Dynamic Envelope	Dynamic Envelope Shading	€ 600.00	Smart Blind Controls X 6	https://www.amazon.co.uk/Ajax-Online-Horizontal-mechanism-Compatible/dp/B07YL4L498/ref=sr_1_1_sspa?keywords=predictably%2Bblinds%2Bcontrols&qid=1679479641&sr=8-1-spons&sp_csd=d2lkZ2V0TmFtZT1zcF9hdGY&smid=A1EES8ACD6FXUH&th=1
Dynamic Envelope	Dynamic Envelope Opening	€ 900.00	Smart Opening Auto Window X 6	https://www.amazon.co.uk/dp/B07H95NLDJ/ref=sspa_dk_detail_2?psc=1&pd_rd_i=B07H95NLDJ&pd_rd_w=O1yt7&content-id=amzn1.sym.15c0cc83-c6c5-4d44-aa3d-0de17a9f3682&pf_rd_p=15c0cc83-c6c5-4d44-aa3d-0de17a9f3682&pf_rd_r=JE581YD1H08W3V1K3SQN&pd_rd_wg=wEj5p&pd_rd_r=b67349aa-10eb-4d38-9537-5314df4563a0&s=diy&sp_csd=d2lkZ2V0TmFtZT1zcF9kZXRhaWw&smid=A322GOSO1OHXT
Dynamic Envelope	Dynamic Envelope Opening	€ 40.00	Smart Hub for controlling Devices linked to Envelope	https://www.amazon.co.uk/SwitchBot-Hub-Mini-Smart-Remote/dp/B07TTH5TMW/ref=pd_bxgy_img_sccl_1/260-4789353-8770526?pd_rd_w=i4W6I&content-id=amzn1.sym.adaa6e74-ba24-420a-83eb-f68e38f864e8&pf_rd_p=adaa6e74-ba24-420a-83eb-f68e38f864e8&pf_rd_r=XSYY2TPRHDRFMRCSC3MC&pd_rd_wg=tSZv4&pd_rd_r=f68b7d35-8a0d-445e-9df3-fc90b821b4e9&pd_rd_i=B07TTH5TMW&psc=1
Grid Flexibility	Smart Home Energy Meter for Local Gen	€ 120.00	Smart Meter monitoring for PV	https://www.amazon.co.uk/KETOTEK-Electricity-Bidirectional-Measuring-Compatible/dp/B0B5KWHB4D/ref=sr_1_4_sspa?crid=2KOADNO46BG2E&keywords=smart+energy+meter+home+hub&qid=1679480549&sprefix=smart+energy+meter+home+hub%2Caps%2C61&sr=8-4-spons&sp_csd=d2lkZ2V0TmFtZT1zcF9hdGY&psc=1
Monitor and Evaluate	Monitor and Evaluate Building	€ 60.00	Smart Hub home with Reporting and control	https://store.google.com/ie/product/nest_hub_2nd_gen?hl=en-GB
EV Charger	Smart EV charger	€ 1,000.00	EV Charger	https://www.myenergi.com/ie/product/zappi-ev-charger/?attribute_pa_power=7kw-1ph&attribute_pa_tethered=type-2-tethered&attribute_pa_colour=white&utm_source=Google%20Shopping&utm_campaign=All%20products&utm_medium=cpc&utm_term=42737&gclid=EAIaIQobChMI3Kvlhefv_QIVidPtCh13HwFFEAYYASABEgIBafD_BwE