

neuGRID: a web portal for brain research and Alzheimer's diagnosis

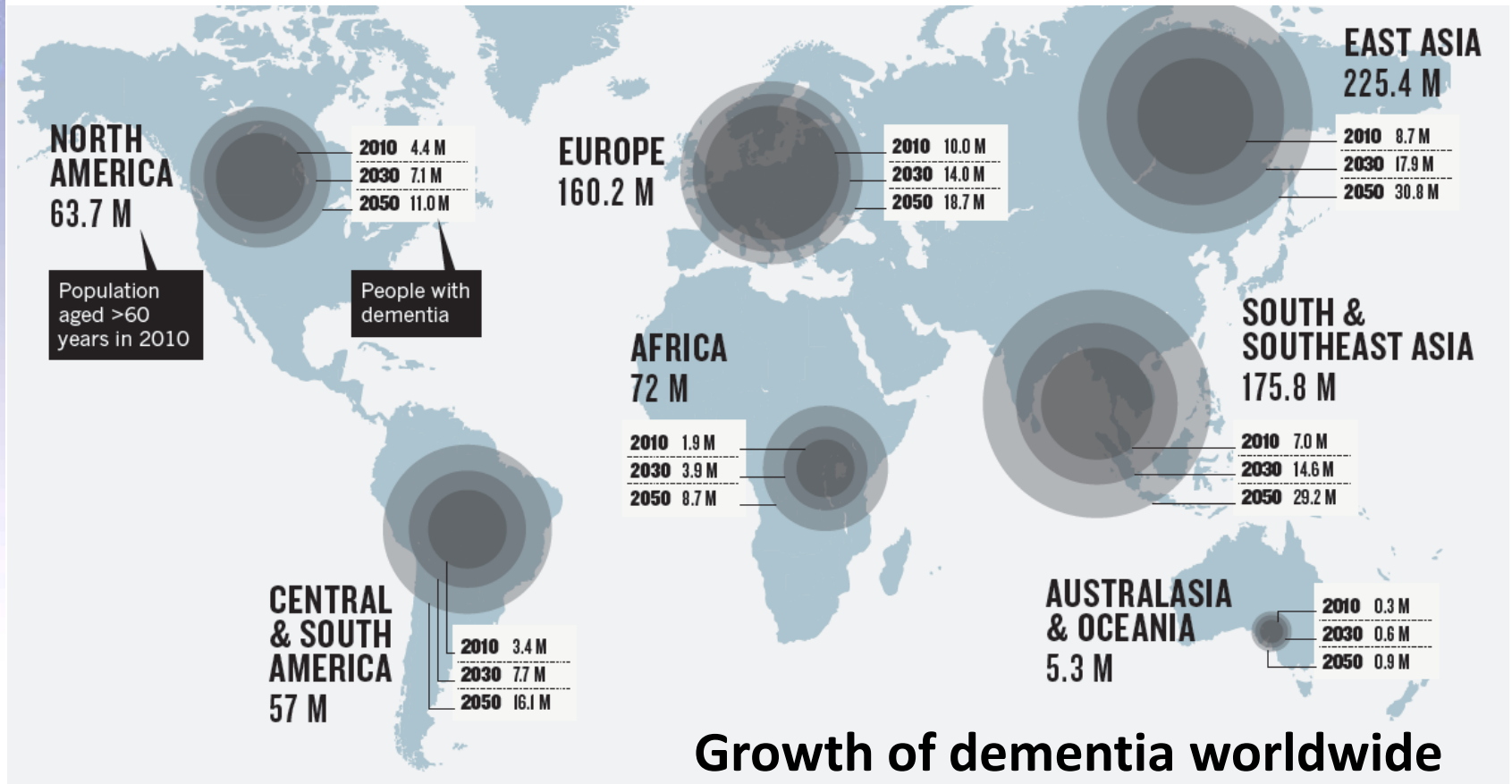


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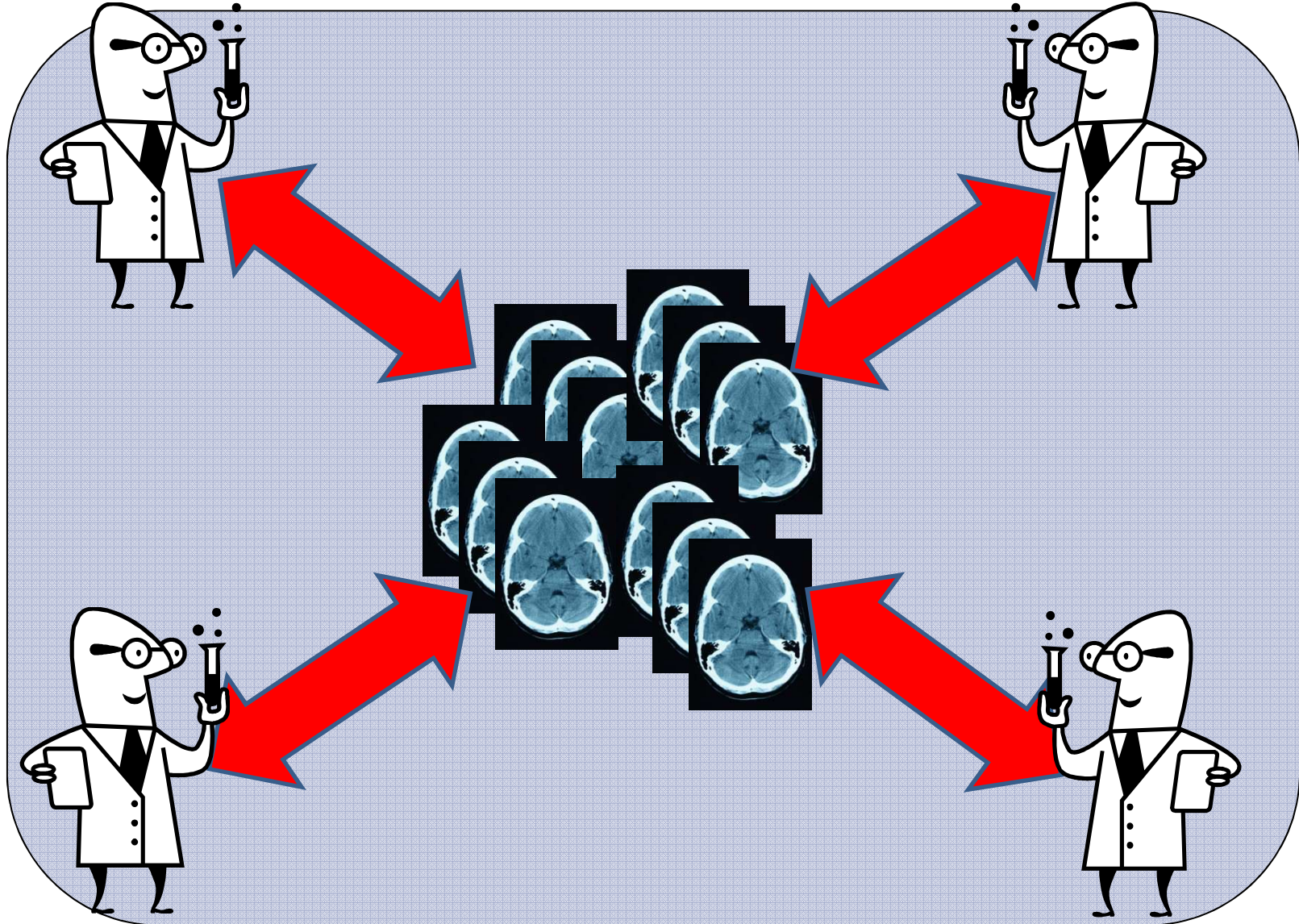


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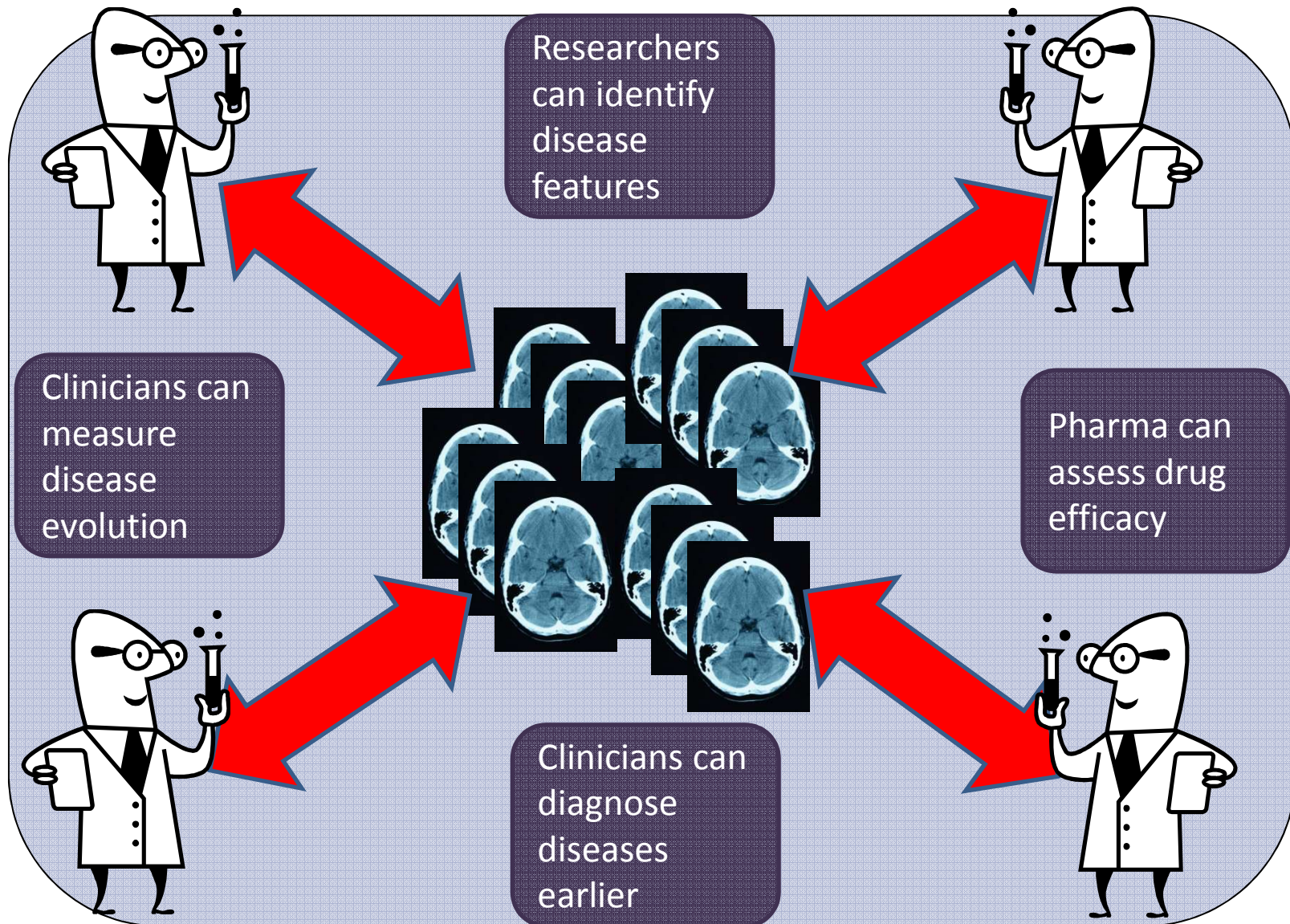
The Societal Challenge

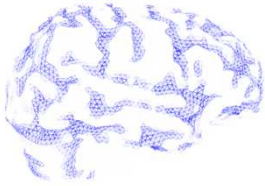


NeuGRID Virtual Laboratory



NeuGRID Virtual Laboratory





Imaging Markers & Pipelines

Toolkits

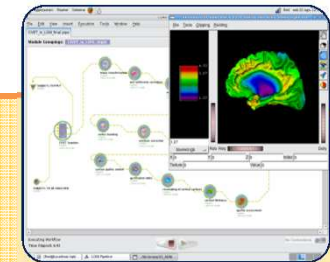
What are markers used for?

- To support physicians in diagnosing diseases,
- To measure disease evolution,
- To assess treatment(s)/drug(s) efficacy, supporting pharma industries in drug developments,
- To further understand diseases and brain anatomy and functions



How do such markers materialize?

- Data mining Algorithms and Pipelines of Algorithms
- Heterogeneous Algorithms and Pipelines toolkits (*i.e.*: *FSL*, *MRICron*, *FreeSurfer*, *MNI/BIC*, *LONI-pipeline*, *SPM*, *Adaboost*, *etc..*)





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1. LOG-IN



CLINICIAN / RESEARCHER

neuGRID e-infrastructure



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CLINICIAN / RESEARCHER



2. AUTHENTICATION



3. CERTIFICATE

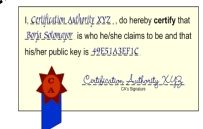
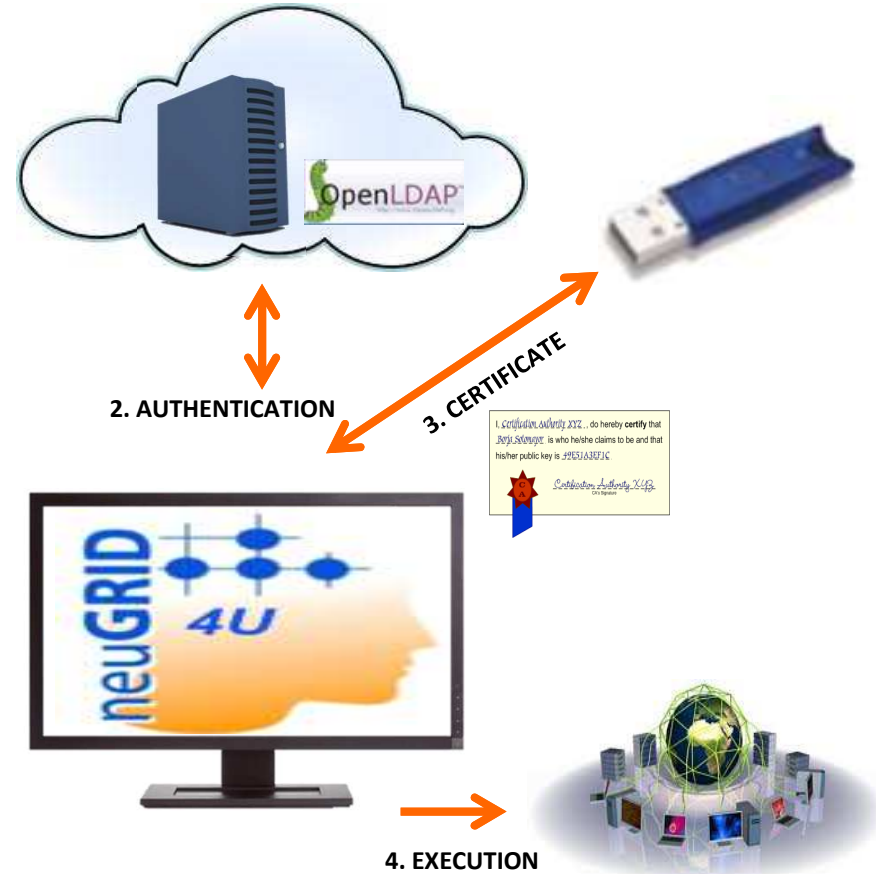




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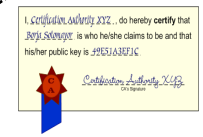
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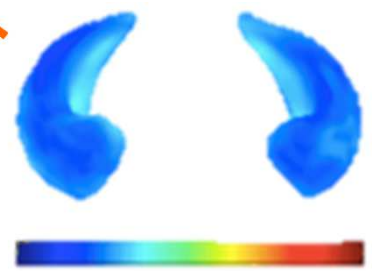
2. AUTHENTICATION



3. CERTIFICATE



4. EXECUTION

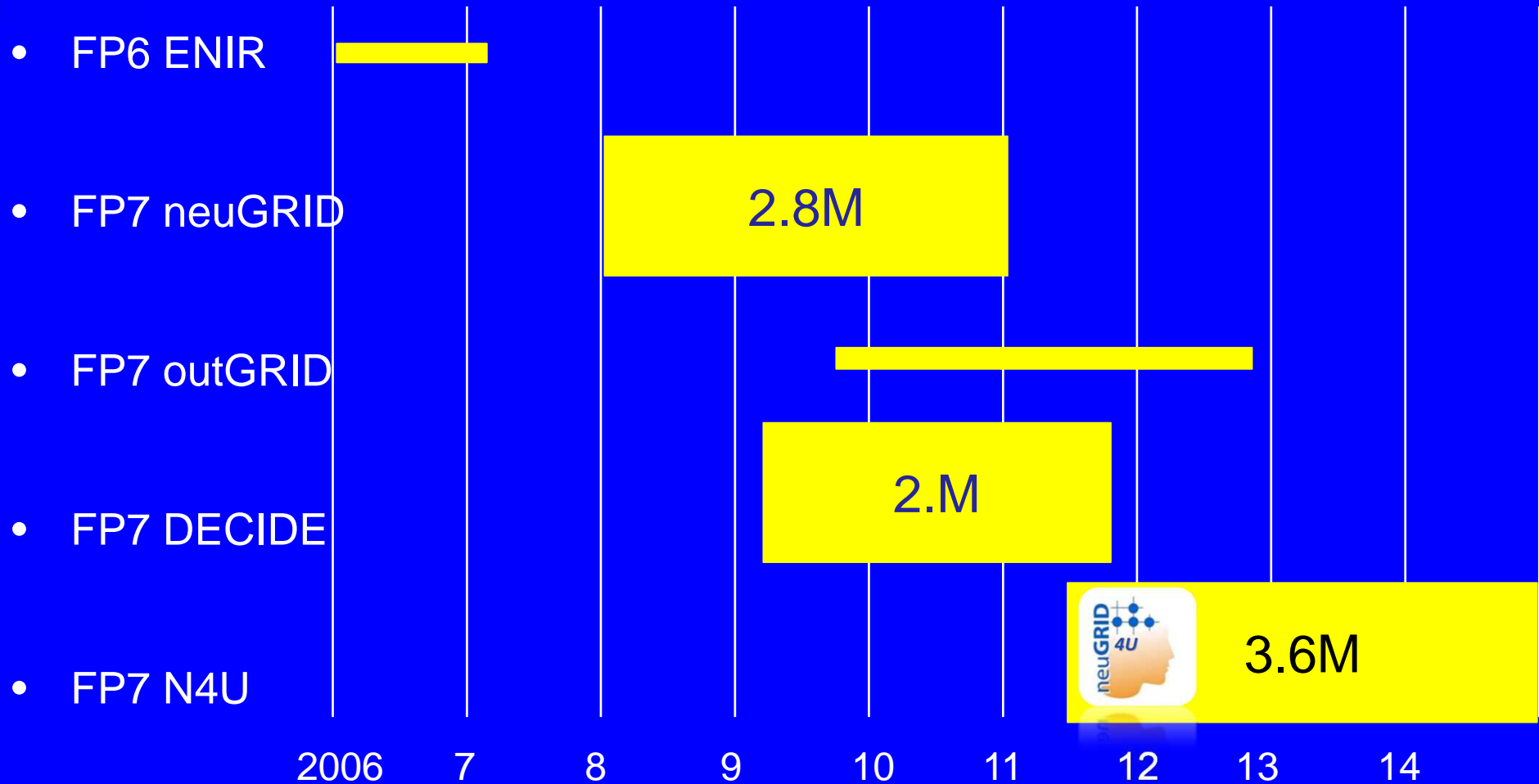


5. OUTPUT

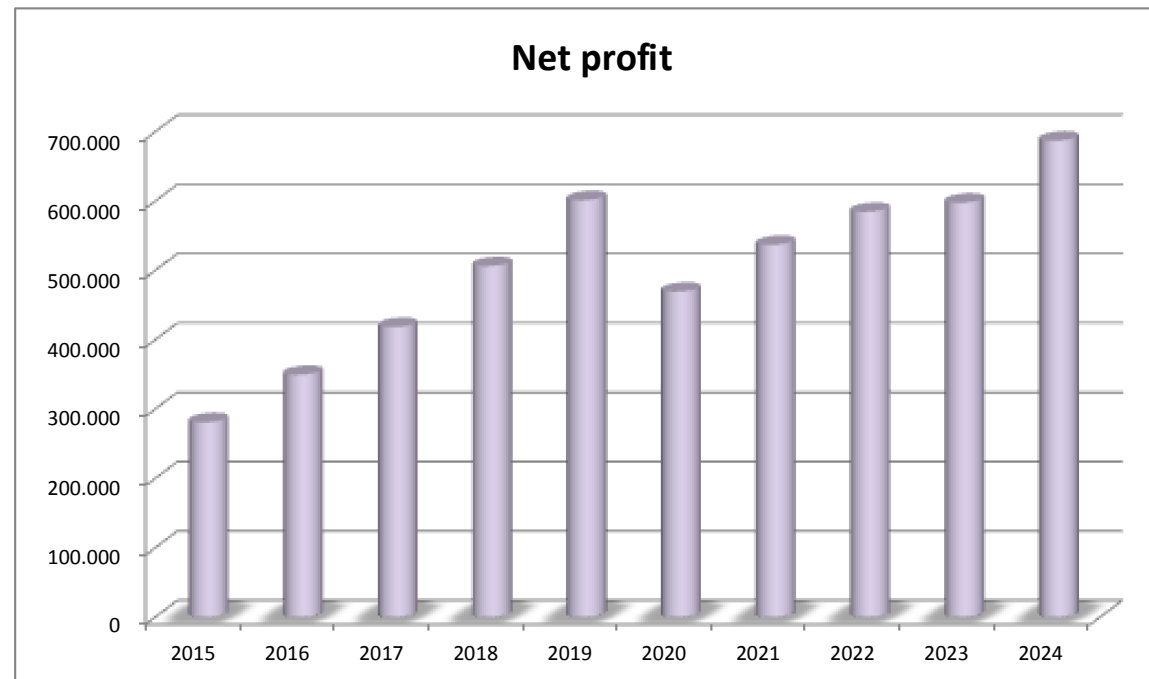




Building Blocks



Profitability



- **24.3 million people had dementia in 2005 (worldwide), with 4.6 million new cases of dementia every year**

According to "Lancet. 2005 Dec 17;366(9503):2112-7. Global prevalence of dementia: a Delphi consensus study. Ferri CP, Prince M, Brayne C, Brodaty H, Fratiglioni L, Ganguli M, Hall K, Hasegawa K, Hendrie H, Huang Y, Jorm A, Mathers C, Menezes PR, Rimmer E, Scazufca M; Alzheimer's Disease International »

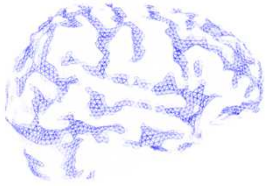
- **€22.000 additional care cost per demented per year in Europe**

"Int J Geriatr Psychiatry. 2011 Aug;26(8):825-32. The economic impact of dementia in Europe in 2008-cost estimates from the Eurocode project. Wimo A, Jönsson L, Gustavsson A, McDaid D, Ersek K, Georges J, Gulácsi L, Karpati K, Kenigsberg P, Valtonen H. »

"Health Aff (Millwood), 1998, Nov-Dec; 17(6):206-16, Alzheimer's disease care: costs and potential savings, Leon J, Cheng CK, Neumann PJ »

- **If the onset of dementia could be delayed by just 5 years, its prevalence would half**

"Acta Psychiatr Scand. 1987 Nov;76(5):465-79. The prevalence of dementia: a quantitative integration of the literature. Jorm AF, Korten AE, Henderson AS »



THANK YOU FOR YOUR ATTENTION!



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