



# Centrelink Voice Biometric Case Study

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# Centrelink Business at a Glance

	2008
Number of Customers	6.5 million
Payments on behalf of Policy departments	\$66.3 Billion
Service Delivery Sites	Over 1000
Annual Phone Calls	Approx. 33 million
Self Service Transactions Support	Over 14 million
Interaction with other agencies	30+ other agencies
Interaction with Policy Departments	25 different policy departments

# Centrelink Call network at a Glance

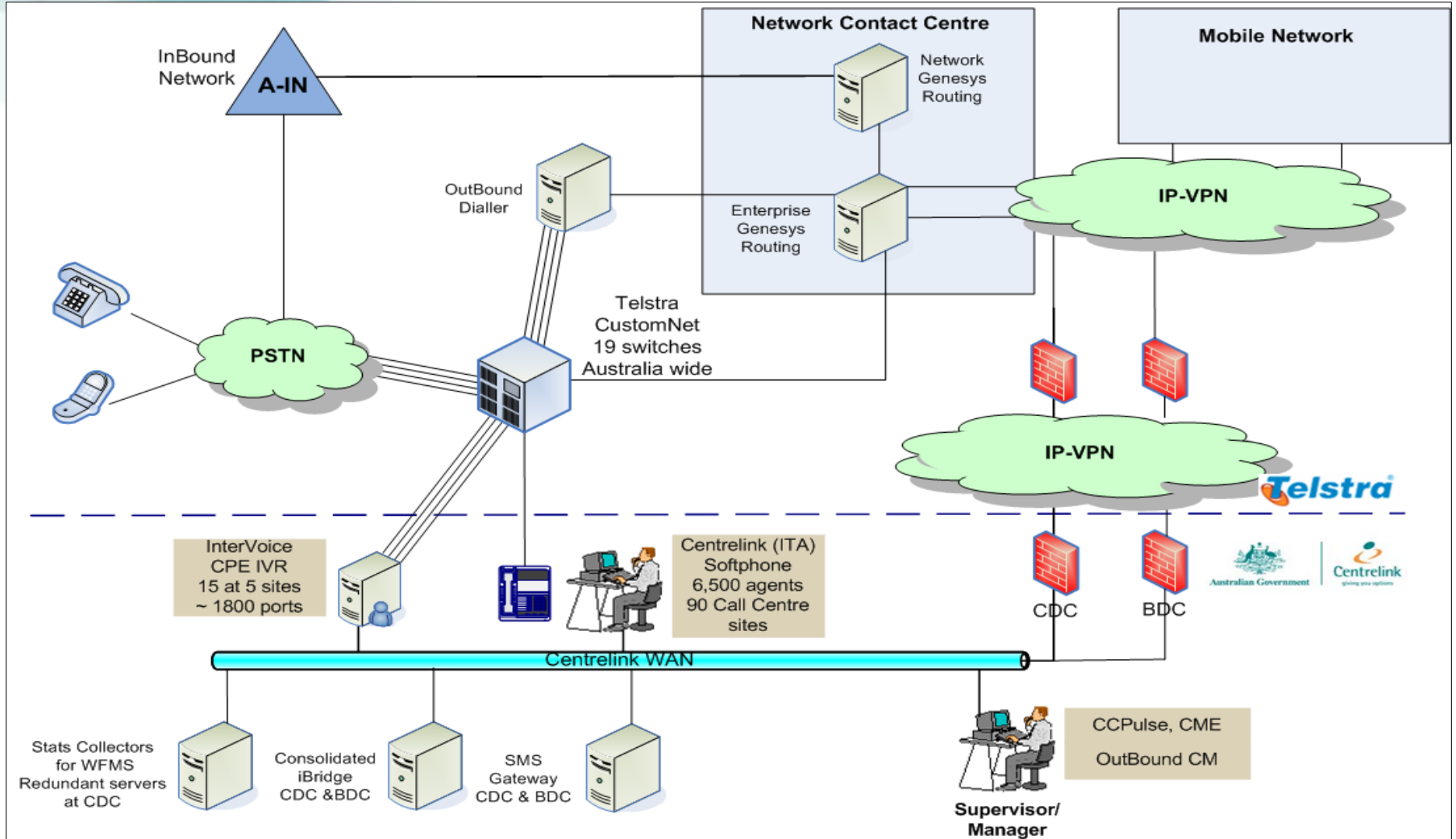
	2009 / 2010
Number of staff	+4,000
Total number of CTI Enabled sites	+130 (25 Call Centres)
Annual Calls	+33 M
Annual Self Service Calls	+5.5 M
Calls handled by IVR each day	Up to 150,000
% of customers entering CRN in IVR	+40%
% of customers entering CRN <u>and</u> PIN in IVR	+10%
New customers registered for Speaker Verification per day	+800
Customers authenticating using Speaker Verification per day	+7,000



# Telephony Technologies

- Computer Telephony Integration (CTI)
- Speech Enabled IVR platform
- Natural Language Speech Recognition
- Menus and Self Service Applications
- Outbound Dialler
- Family Assistance (FAO) Open Speech Call Router
- Self Registration
- SMS
- Speaker Verification
- Call Recording (IVR)
- Call Recording (Agent)

# Telephony Architecture





# IVR Applications – Steerage

- **Speech enabled dynamic menus** - Callers to Centrelink's main access numbers can select their options using menu options in the Umbrella speech call router application. This is a menu which accepts spoken responses and transfers customers to a Customer Service Adviser – customers with a PIN or Voice Print are offered self service options
- **FAO Call Router** - Open speech recognition that asks a customer say what they are calling about rather than having to select from menus. Allows authenticated customers quicker access to self service options
- **Consolidated Service Desk** - Centrelink and Medicare FAO staff are able to access many of Centrelink's service / help desks via an 'open speech' menu
- **Multi Lingual Call Router** - Callers to Centrelink's Multi Lingual Call Centre line are able to nominate their required language service via an intuitive and user friendly speech enabled menu
- **Interpreter Connect** - Connects CSA's servicing Language customers to an available Interpreter across 189 language/dialects in two scenarios – On demand and Appointments



# IVR Applications - Transactional

- **Report Employment Income** - Allows customers to declare their fortnightly earnings (and Activity Test compliance, if applicable) and have their payment stimulated if all business rules are met
- **Advances application** - Allows customers to check potential eligibility for an advance – Income Support Payment or Family Tax Benefit – and, if eligible, to be issued the advance payment; also check repayment progress / next available date for an advance
- **Family Income Estimate update** - Allow customers to update their Family Income Estimate for the current and next financial year
- **Document Request** - enables customers to request documents and cards to be sent to them by mail eg Reporting Statement, replacement Health Care Card
- **Study intentions** - Youth Allowance customers can confirm their study details for the coming year



# IVR Applications - Informational

- **Payment Information** - This enquiry service provides information to customers regarding their recent or upcoming payments
- **Holiday Processing** - Customers can access details of their revised reporting and payment dates affected by national holidays (eg Easter/Christmas)
- **Balances** - Allows customers to check their working credit or student income bank balance, and also their next reporting date if applicable
- **BasicsCard Balances** - allows customers under Income Management to check the balance of their payment cards 24x7
- **Smartraveller** - An IVR speech service provided for the Department of Foreign Affairs and Trade (DFaT) which plays travel warnings to callers using Text To Speech technology to play information dynamically downloaded from the DFaT WEB site
- **Indigenous Self Service Line** - a non-speech (ie touchtone) application allowing customers to use keypad to obtain some of the above



# IVR Applications – Authentication

- **Customer Profiling** - For customers who enter their CAN in the IVR a profile is returned with name, benefit type and authentication credential available (PIN, voice print or none). This information is used for IVR call flows and subsequent routing decisions
- **PIN Authentication** - Customers with a PIN credential returned in their profile can authenticate in the IVR
- **Speaker Verification Authentication** - Customers with a voice credential on their profile can use the Voice Biometric system as an alternative to six digit PIN credential for authentication
- **Change Pin** - Customers can change their PIN without speaking to a CSA
- **Self Registration** - Customers are able to obtain a PIN without talking to a Customer Service Adviser
- **Speaker Verification Enrolment** - Customers with an “expired” PIN can enrol a voice credential

# SV Drivers

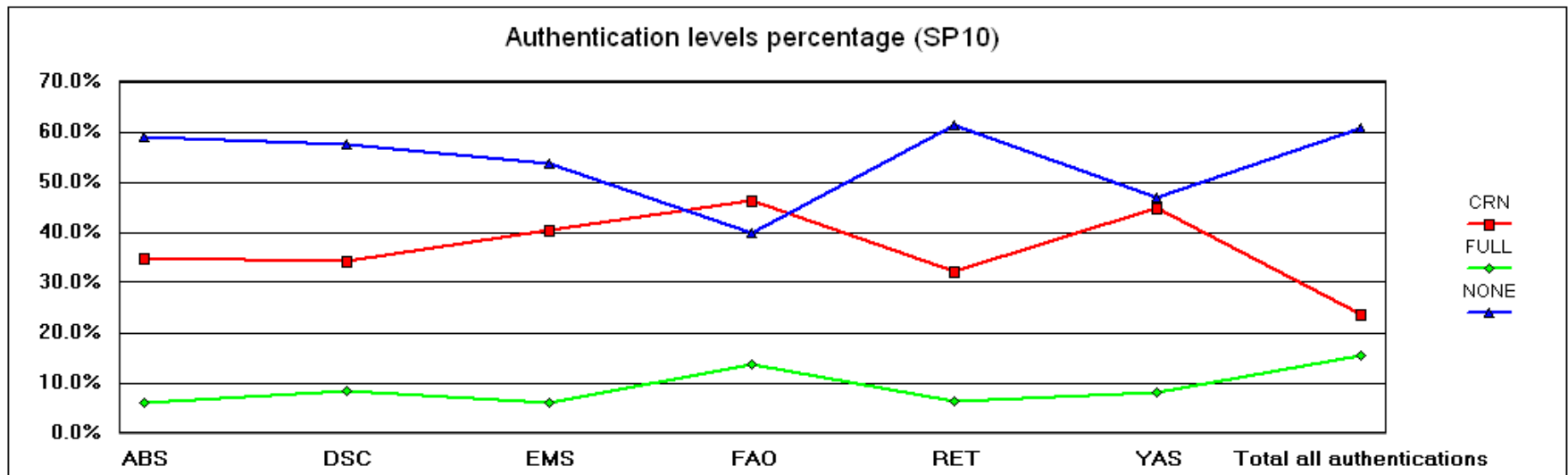
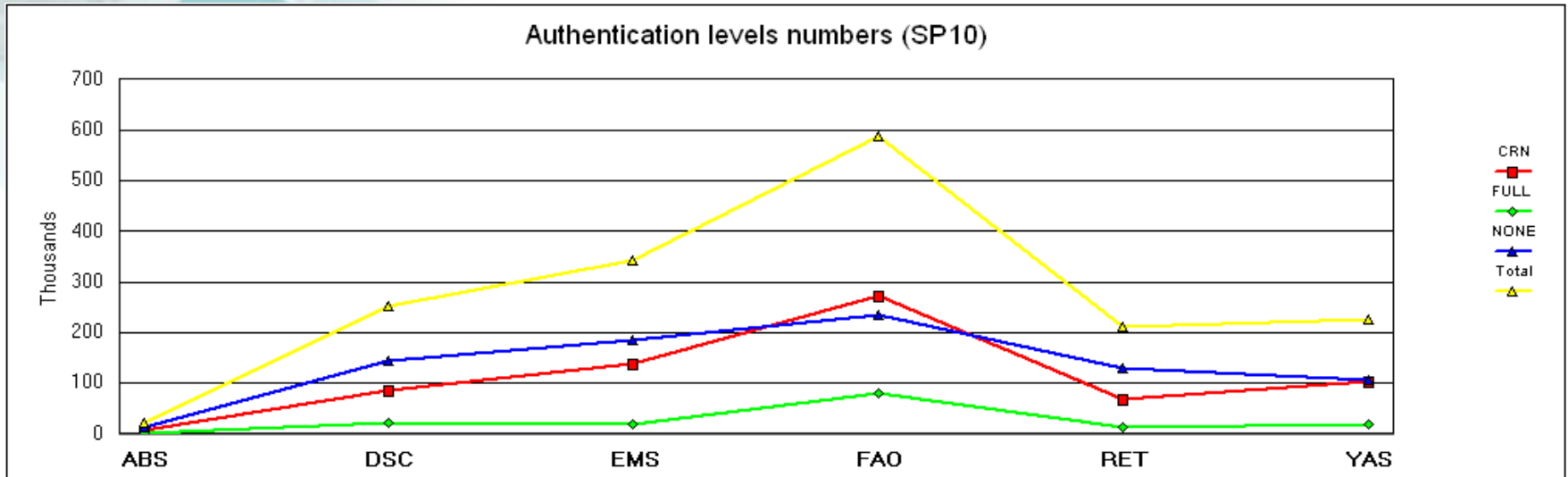
Building Capability for Government	What it Means to Centrelink and DHS
Providing an easier means of identity authentication for customers	<ul style="list-style-type: none"> <li>•Customer satisfaction</li> </ul>
Reduced average call handling times of customers	<ul style="list-style-type: none"> <li>•CSAs are able to receive more calls</li> <li>•Reduced CSC traffic</li> <li>•Customer satisfaction</li> </ul>
Increased security of customer information	<ul style="list-style-type: none"> <li>•Good Corporate Reputation</li> <li>•Gain public trust</li> <li>•Lay foundation for future authentication technologies</li> </ul>
Opportunity for fraud detection	<ul style="list-style-type: none"> <li>•Deterrence</li> <li>•Help in prosecution</li> </ul>
Customer Service Centre improvement	<ul style="list-style-type: none"> <li>•Assist in establishing POI of customers who may have difficulty to provide acceptable ID</li> </ul>

# SV Drivers

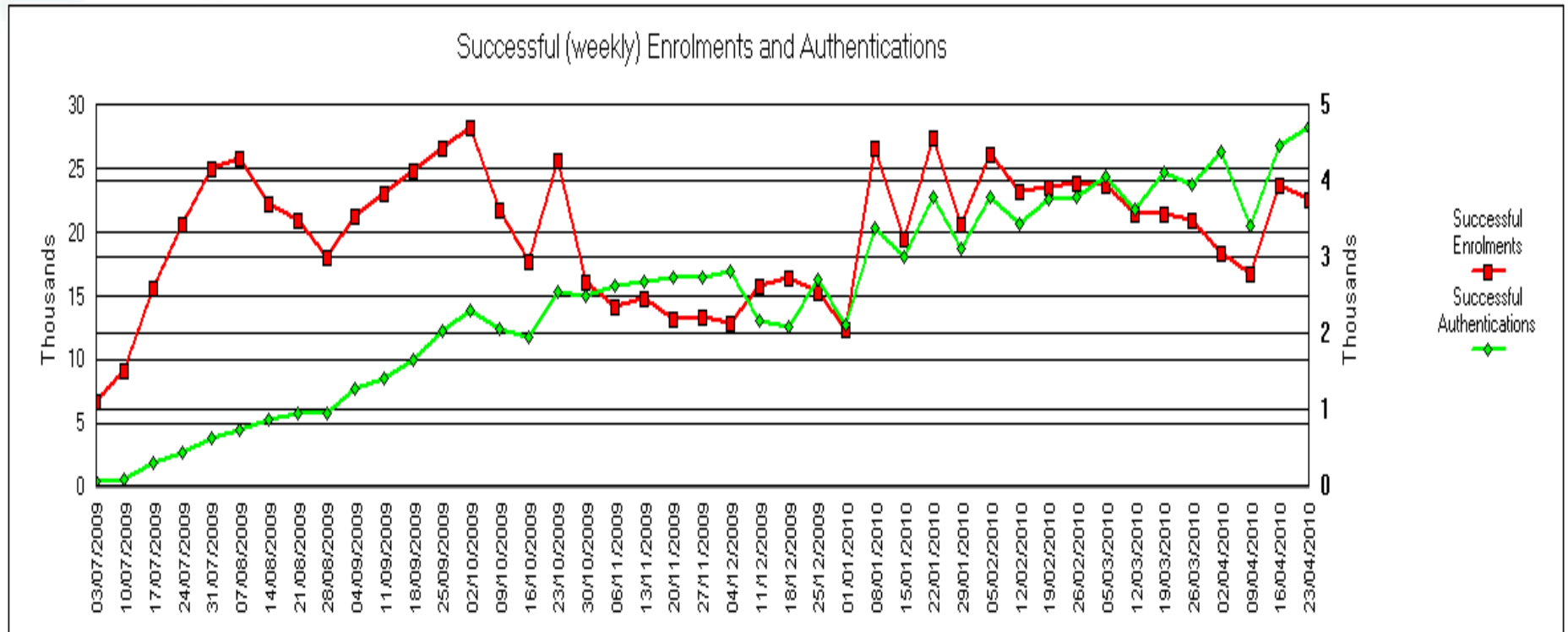
- PIN resets and forgotten PIN
  - 4,400 customers per annum
  - 25% PIN failure rate
- PIN trading
  - Tasmanian trial on REI callers tested for this
    - Customers were informed we were checking
    - 1 in every 100 callers were still not the correct customer
- PIN theft
- PIN is a level 2 credential only
  - Channel parity
- 90% of speaker verification pilot users prefer speaker verification over PIN



# SV Drivers

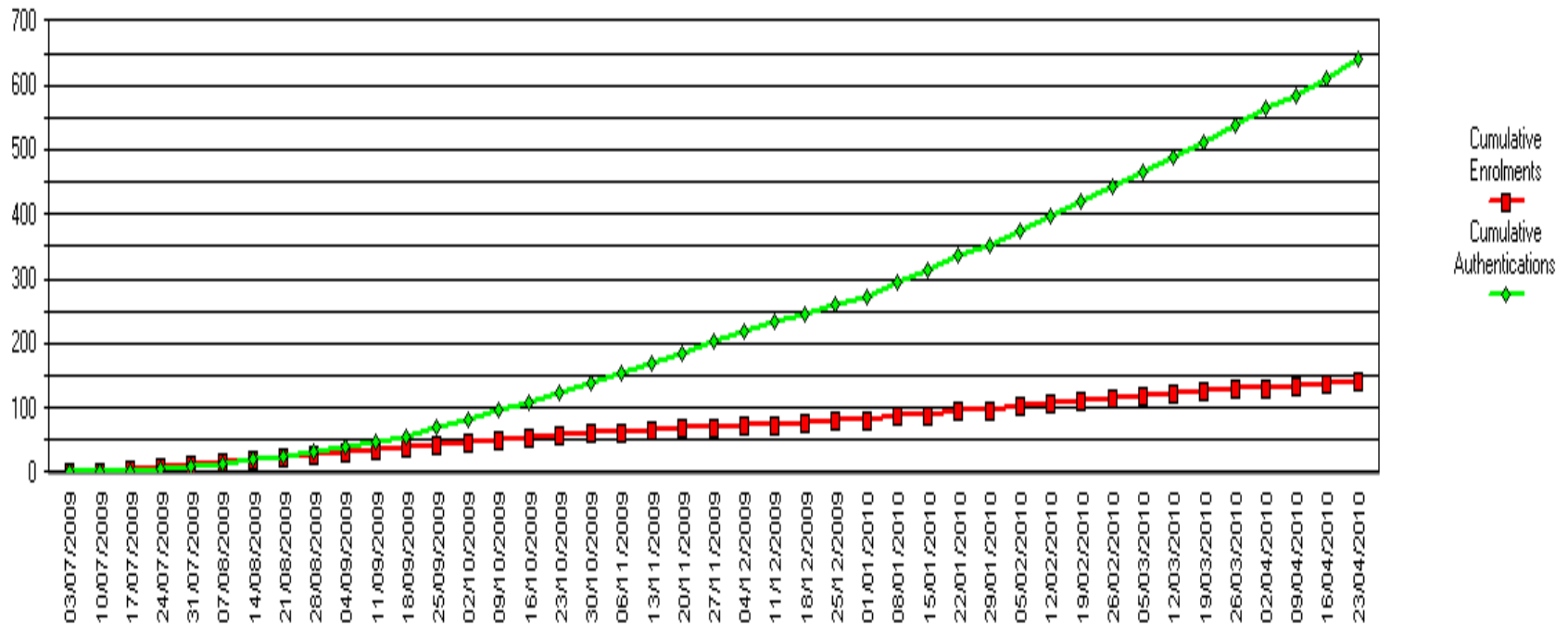


# SV Results

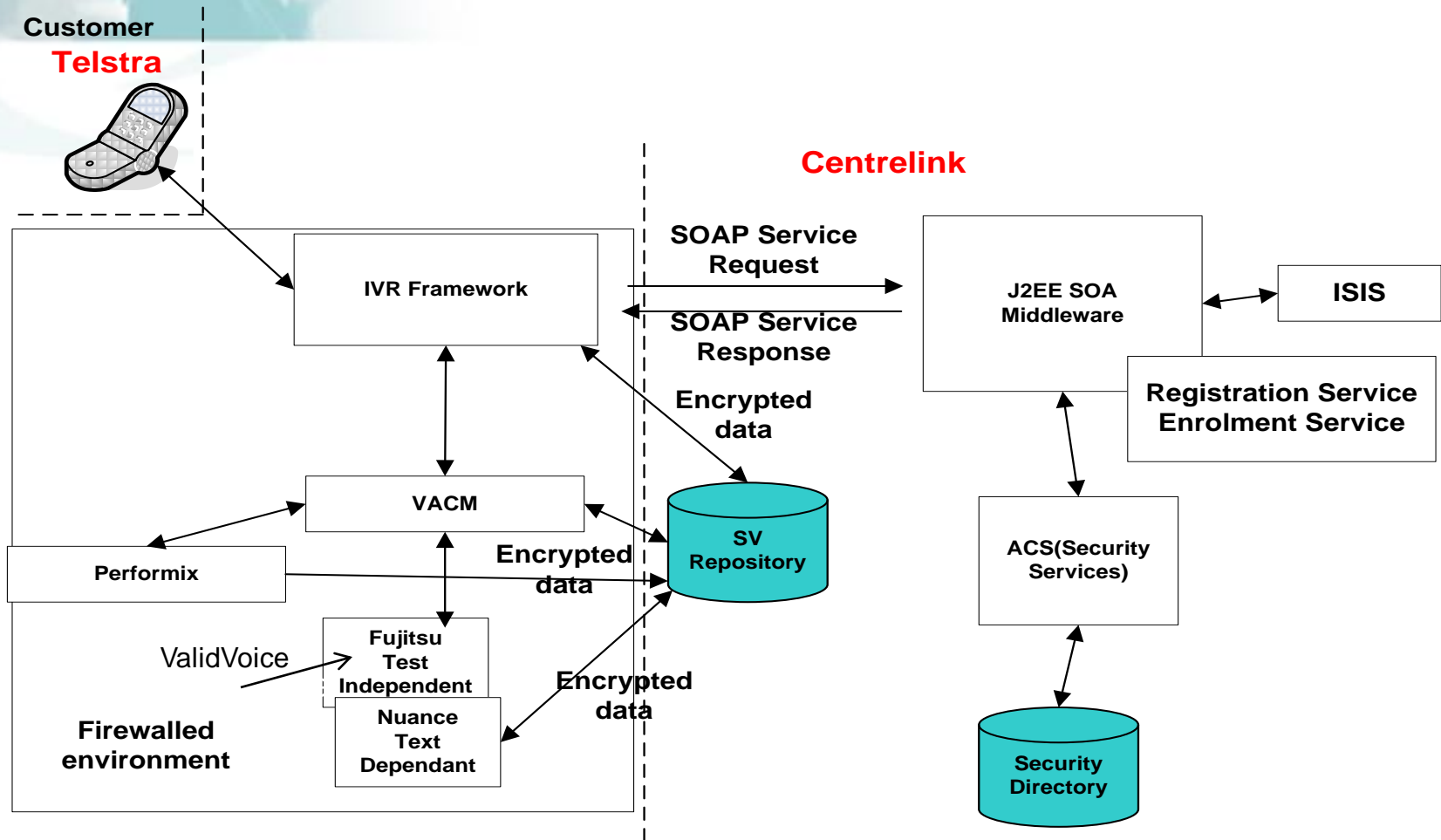


# SV Results

Cumulative Totals for successful Enrolments and Authentications



# SV Logical Architecture

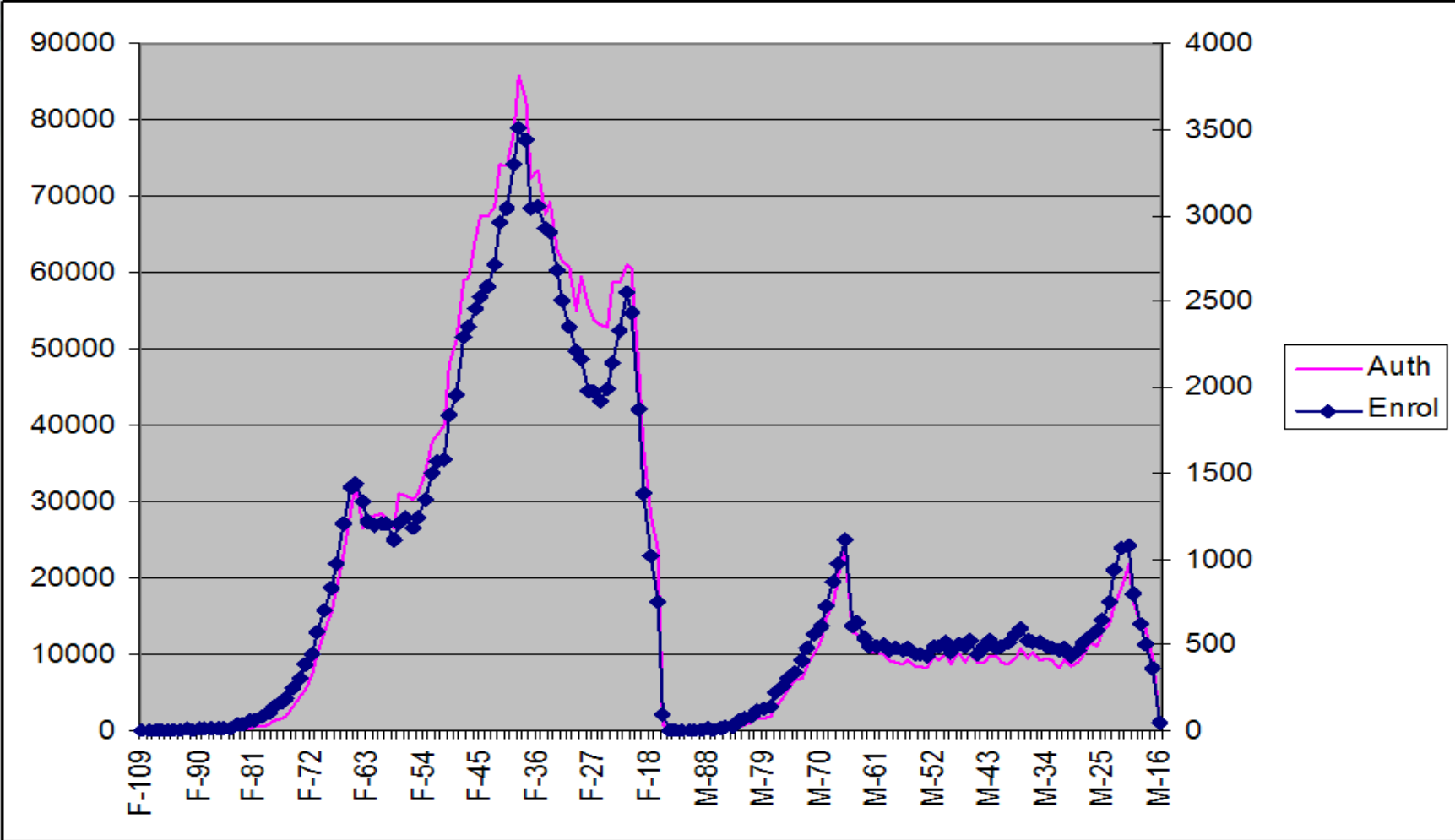




# Who Is Using SV ?

- Open to all customers who call one of our main business lines and have an expired PIN – key business rule in uptake
- Diverse demographic ie Seniors, people with disabilities and students
- Oldest person to have enrolled and successfully authenticated 99, youngest 16

# Who Is Using SV ?





# Some Lessons

- Make sure security is balanced with customer usability
- Engage your stakeholders early in the process and take them along the journey with you
- Prove the technology works and gain business confidence
- Be ready to adapt including improving call flows and or business rules.
- Think about the future including upgrades / new technology
- Plan ahead for change for example aging template



# Future Plans and challenges

- Enrolment and authentication success rates - SQA issues
- Nuance 3.5 to 4.1 upgrade – template change
- Dual Vs Single engine
- Portfolio wide Telecommunications Procurement
- Inter-agency expansion – Medicare, CSA etc.
- GOS offering in call channel
- Convert all current PIN users (~470,000users and ~ 5 million calls p.a.)
- Pre-position for new higher risk transactions – change of bank details