Business Process Redesign (BPR) for Registrars and Direct registrants*:-

Rationale - Why now?
1. All business logic is now in one place (post NRC go-live) - IEDR has one combined Java-based platform (MVC framework)
2. Up to now, the Invoicing C Program was sacrosanct. Too risky to abandon it, or attempt a rewrite, affecting the separate Registrar systems - API and Console.
3. Trend to pay in advance of invoicing by Registrars. (See Charts & Data). The split in July '11 is 50:50 (Monthly R&R v's ADP/PIA), compared to 76:24 in Jan'09.
4. Overall requirement – "One-touch, Pay and Renew online : AnyTime, AnyTerm, AnyMedium".

Proposed **policy** changes:-
1. Change to the Billing Policy:-
    a. Invoices will be issued when domains are paid for.
    b. Invoices will no longer be issued in arrears of the renewal date/transfer date/new reg date.
2. Change to the Credit Control Policy:-
    a. 30 day 'billing cycle' credit terms will be eliminated for all transactions - renewals, new registrations and transfers - arising from Billing Policy change.
    b. Replaced by a 29 day 'renewal cycle' i.e. 29 days from the renewal date until the deletion date. (i.e. = 1+14+14=29)
    c. New regs and Transfers must be paid-for *before* the Tx Ticket is completed on CRS (if insufficient funds, the Tx is stalled @financial failure')
3. No change to Deletion Policy (in that the Deletion Policy is still to delete domains which are not paid when due). The warning period still applies.

Proposed **procedure** changes ('Business Requirements'):-
1. Eliminate month-end batch processing procedures. Replace with real-time transaction processing (simultaneous invoicing/receipting – like ADP/PIA).
2. Eliminate MSD process and procedures for transaction types – NewReg and Transfers
3. Introduce new non-renewal process and procedures for renewals process (NRP). Non-renewed domains will be Mailed on RenDt+1 day (suspended after 14 days, deleted after 14 days)
4. Invoice procedure – terminate the use of the month-end Invoice 'C Program' for R&R and for Transfers.
5. Invoices will now be issued only when cash receipts have been processed - for renewals, new registrations and transfers.
6. Invoices must xml-ed to Registrars (and to the Vision Accounts Systems - simultaneously).
7. Invoice sequencing MUST be controlled within CRS. No duplicates/no missing numbers. VAT calculations/controls must be in place within CRS.
8. Deposit account on CRS must be updated for all Tx, and CRS must display Statement of Tx/chronological Transaction History.
9. The PIA programs/code will be tweaked to reflect payment in advance of the renewal date (rather than the current, pay in advance of month-end Invoicing).
10. The ADP programs/code will be tweaked to reflect deposit account deduction in advance of the renewal date (rather than in advance of the current renewal/transfer invoice date).

The initial **cost benefit** analysis assessment (TBD):-
1. Eliminates non-value added activities/processes. Facilitates (xml-based) transmission of invoices to Registrars by email. Reduction in tx & account reconciliation efforts.
2. Time savings for Registrars. 'One-touch' domain management/reduction in duplication/reduction in complexity & tx costs/Faster renewal process.
3. Deterministic Deletion dates/synchronisation of Registrar's customers' and IEDR transactions (?)
4. Adverse impact on Registrar working capital/once off Cash Flow impact of faster payment/better Deposit Account management required re 'insufficient funds'

Change process to be followed:-
1. Full consultation with the Registrar community (using the 10 step PDP process). Impact Assessment required for Registrars (users of API and Console), for Accounts (Int.Controls, and Rev. Assurance)
2. ASD and Accounts to prepare a full Requirements Specification Document, to assess the impact on all API and Registrar Console code. NASK to cost the proposals (multiple iterations may be required?)
3. Outline project plan will be required. To be documented and addressed:-
    a. Key milestones:-
    b. Critical success factors :- take time to explain to Registrars/lots of notice/don't want to be accused of greed/ acceptance from API Registrars is critically important/fast execution essential/
    c. Risk factors:- inadequate IEDR (+NASK?) resources for fast execution/costly project?/UAT may not identify errors, corner cases/it's still not EPP/

* The impact of the proposed BPR on **Direct Registrants** is outside the scope of this document, at this time.

Process	Current Practice	Proposed Practice	Technical Impact Assessment	Business cost-benefit analysis

• Renewals
  o Pre-invoicing process
  o Invoicing Process
  o Receipting process
  o MSD process
  o Transfer process
  o Credit note process
  o Upload/Extraction process
	• No pre-invoicing process.
	• Invoices issued on the last calendar day of the month of renewal.
	• 30 day credit terms offered.
	• Can pay off-line, online or from Registrars deposit account. (Renewal date is rolled-forward one year, on receipt). Receipts follow the "Upload/Extraction process".
	• After 30 days, on the last calendar day of the next month, domains on unpaid invoices follow the invoiced domains "Cleardown" process.
	• "Cleardown" process = Domains are labelled 'M' and will follow the "MSD" process.
	• The "MSD" process = Domains labelled 'M' will be MSD e-mailed on the next MSD Friday (after 1 day(min) and 14 days(max). If unpaid after 14 days, the domains will be suspended (for 14 days) and then deleted after a further 14 days. For deleted domains, the "credit note" process is run.
	• Transfers (from the invoiced BillC to another BillC) are allowed anytime post-invoicing, right up to the deletion date. (See below for the "transfer" process).
	• The "credit note" process = a credit note (for a non-renewed Transfer-away or for an non-renewed MSD'd domain) is raised by VAM, and is offset in Vision (manually, by Accounts staff) against the balance outstanding on the related Renewals invoice.
	• Note:- there are no refunds.
	• The 'renewal cycle' is therefore 60 days min and 104 days max. Where 'min' = 1+30+1+14+14=60, and 'max' = 31+31+14+14+14=104.
	• The 'billing cycle' is 59 days min and 73 days max. Where 'min' = 30+1+14+14=59, and 'max' = 31+14+14+14=73.
	• "Upload/Extraction" process = 1x weekly, on average, Receipts batches are extracted into csv files and uploaded (by VAM) to the Accounts systems (Vision). Includes receipts Offline (ROF), Online (RON) and ex-Deposit (RED).
		• No pre-invoicing process.
		• Invoices issued on *receipt* of cash payment.
		• Can pay online, credit card, from deposit account. (Similar to PIA/ADP current processes). Receipts follow the "Upload/Extraction process".
		• No off-line receipts allowed (no 30 day credit terms). However, off-line replenishment of deposit account is allowed (by credit transfer or by cheque).
		• There is no invoiced domains "Cleardown" process (because invoices are not issued until receipt of cash payment).
		• On the renewal date +1 day, domains unpaid (i.e. not renewed) are labelled 'M' and will follow the "MSD" process.
		• The "MSD" process = Domains labelled 'M' will be MSD e-mailed (on the renewal date +1 day). If unpaid after 14 days, the domains will be suspended (for 14 days) and then deleted after a further 14 days.
		• Note:- at any time before *payment*, the domain can be transferred from the current BillC to another BillC, and the "transfer" process applies. Pay for 1 year renewal fee, *before* the Tx can be completed. (See below for the "transfer" process).
		• There is no "credit note" process (because invoices are not issued until receipt of cash payment).
		• Note:- there are no refunds.
		• The 'renewal cycle' is therefore a fixed 29 days (i.e. = 1+14+14=29).
		• The 'billing cycle' is 0 days.
		• "Upload/Extraction" process = tbd. Potential exists to replace the csv extractions with an XML process. To be explored with Accounts/ASD/GL System providers – DP Systems et al.
			• The practice change as described in the columns to the left will require technical changes to CRS-API, CRS-WEB, CRS-WS-API, NRC, ACP, CP, Batch, MYRen, ClearDown & R&R Invoicing.
			• For instance, we propose that the CRS-API application will have four payment related commands deprecated.
			• A refined account:pay command will be introduced which will handle the renewal payment requests from Registrars via the API.
			• CRS-API details can be reviewed in the document ";"
			• The clear-down procedure will be deprecated. Its logic will be refined to meet the requirements of the proposed practice such that unpaid domains which are past their renewal date will be pushed in to 'Quarantine'. Possibly a batch procedure called 'PushQ' should be introduced in to CRS-WEB which would usually be run via **cron4j** the java scheduler. Additionally, it may be the case that IEDR personnel want to manually interact with PushQ.
			• The MSD procedure will be deprecated. The changing of states of a domain in quarantine will be handled by a batch type of procedure scheduled through **cron4j** in CRS-WEB.
			• CRS-WEB details can be reviewed in the document "**CRS-WEB BPR Design Document**"
			• The requisite changes outlined above for the CRS-API imply similar changes for NRC given that we offer the same procedures via the two channels. That is to say, NRC must be refined in a similar manner. As such, CRS-WS-API will expose the CRS-API refined payment commands to NRC. NRC will require changes to layout in terms of the simplification of payments.
			• NRC details can be reviewed in the document "**NRC BPR Design Document**"
				Pros:-
				• Eliminates the problem whereby domains in the Billing Cycle cannot be transacted upon.
				• Un-complicates MSD massively.
				• Move away from month-end batch processing, to daily real-time transaction processing.
				• Less paperwork/manual handling of paper (based on XML e-mailing of invoices) instead of manually mailing invoices.
				• The 'renewal cycle' is therefore a fixed 29 days (i.e. = 1+14+14=29). For registrars, the deletion date becomes shorter and totally predictable, a benefit for their customers.
				• No need to wait for credit notes (112 days).
				• Registrar customers won't have to wait 3 months for invoices to leave their accounting systems.
				• The renewal date disclosed by the 'whois' is accurate.
				• Non-renewed domains are released much quicker, for re-registration.
				• From a technical perspective, the process change un-complicates the code. The new process eliminates the "search" through the Db transaction history, for an invoice or a receipt, before re-activation out of MSD.
				• Reconciliation efforts by Accounts staff are substantially reduced (because the time delay between cash receipts/Realex posting and Vision G/L posting is eliminated - by simultaneous invoicing/Receipting).
				• Feature improvements:- Registrars may customise (some of) the wording of the MSD e-mails. (TBD)
				
				Cons:-
				• The 'billing cycle' is 0 days. Registrars lose 30 day credit terms (effectively losing a 'billing cycle' of a possible 59 days min to 73 days max). Cost ranges from 32cents up to 40cents.
				• Recoding effort could be significant (TBD).
				• Lots of UAT required - from Accounts.

Process	Current Practice	Proposed Practice	Technical Impact Assessment	Business cost-benefit analysis
• New registrations o Pre-invoicing process o Invoicing process o Receipting process o MSD process o Transfer process o Credit note process o Upload/Extraction process	• The pre-invoicing process = the registration procedures performed by Registration Services Team. An application ticket is "Admin passed", then "DNS tech passed" before becoming a "live" domain in the database, during the next rebuild. • Invoices for new registrations are issued on the last calendar day of the month of renewal. • 30 day credit terms offered. • Can pay off-line, online or from Registrars deposit account. (Renewal date is rolled-forward one year, on receipt). • After 30 days, on the last calendar day of the next month, domains on unpaid invoices follow the "Cleardown" process. • "Cleardown" process = Domains are labelled 'M' and will follow the "MSD" process. • The "MSD" process = Domains labelled 'M' will be MSD e-mailed on the next MSD Friday (after 1(min) and 14 days(max). If unpaid after 14 days, the domains will be suspended (for 14 days) and then deleted after a further 14 days. For deleted domains, the "credit note" process is run. • "Transfer process" does not apply for new regs. New domains are 'locked' until payment is received, so no transfers allowed. (See below for the "transfer" process). • The "credit note" process = a credit note is raised by VAM, and is offset in Vision (manually, by Accounts staff) against the balance outstanding on the related New Reg invoice. • The 'new reg cycle' is therefore 60 days min and 104 days max. Where 'min' = 1+30+1+14+14=60, and 'max' = 31+31+14+14+14=104. • The 'billing cycle' is 59 days min and 73 days max. Where 'min' = 30+1+14+14=59, and 'max' = 31+14+14+14=73. • "Upload/Extraction" process = 1x weekly, on average, Receipts batches are extracted (by VAM) and uploaded to the Accounts systems (Vision). Includes receipts Offline (ROF), Online (RON) and ex-Deposit (RED).	• The pre-invoicing process = the registration procedures performed by Registration Services Team. An application ticket is "Admin passed", then "DNS tech passed", as before, however before it becomes a "live" domain in the database, during the next rebuild, the "Invoicing/Receipting" process must run. • The "Invoicing/Receipting" process checks the deposit account - if there are sufficient funds, the new domain is "financial passed" and proceeds to go live during the next rebuild. (akin to the current "MYR" process). The deposit account is reduced and the invoice is raised, simultaneously. • If there are insufficient funds, an error e-mail is sent and the process will try 3 more times before abandoning the transaction (and rejecting the New Reg request). • There is no "MSD" process (because domains are not invoiced until they are paid for, before the ticket application is accepted). • "Transfer process" does not apply for new regs. New domains must be paid for *before* registration can be completed, so no transfer is allowed. (See below for the "transfer" process post-payment). • There is no "credit note" process, for the same reason. • The 'new reg cycle' is therefore 0 days. • The 'billing cycle' is 0 days. • "Upload/Extraction" process = tbd. Potential exists to replace the csv extractions with an XML process. To be explored with Accounts/ASD/GL System providers – DP Systems et al.	• The practice change as described in the columns to the left will require technical changes to CRS-WEB. • The batch C application, which makes domain objects from ticket objects, will be deprecated. • Instead, for example, ticket objects will be processed by Hostmasters in CRS-WEB such that when they approve a domain, it becomes 'Admin Passed' where after, the DNS would be immediately verified by the CRS-WEB DNScheck process, where upon success, the registration billing process within CRS-WEB would be invoked. • CRS-WEB details can be reviewed in the document "**CRS-WEB BPR Design Document**" • It is intended that the DNScheck C programme is deprecated and that its logic is encapsulated in the core CRS-WEB application. • Similarly, the ACP application will be deprecated and its functionality in terms of reporting **or** manual / automatic extractions of XML/CSV receipts will be migrated to CRS-WEB.	Pros and Cons – as above for Renewals, and in addition:- • There is no "MSD" process (because domains are not invoiced until they are paid for, before the ticket application is accepted). • There is no "credit note" process, for the same reason.

Process	Current Practice	Proposed Practice	Technical Impact Assessment	Business cost-benefit analysis

• Transfers (XFER)
  o Pre-invoicing process
  o Invoicing Process
  o Receipting process
  o MSD process
  o Credit note process
  o Upload/Extraction process
 	
Note re one complexity:- Transfer Invoice extraction must be done before the R&R Invoice extraction (to avoid double-billing).
 	
Transfers take place in respect of domains in the billing cycle and domains which are outside the billing cycle.
• For transfers within the billing cycle, the losing Registrar must get a credit note (for the earlier renewal invoice). The winning Registrar will receive a Transfer invoice.
• For transfers of domains which are outside the billing cycle, there is no credit note to the losing Registrar. The winning registrar will receive a Transfer invoice.
	• The pre-invoicing process = the registration authentication procedures performed by Registration Services Team. In this case, once the transfer request is accepted by RS, the domain enters "locked status" (to ensure that there is no further transfer, until the domain is paid for).
	• Transfer Invoices are issued on the last calendar day of the month of renewal.
	• 30 day credit terms offered.
	• Can pay off-line, online or from Registrars deposit account. (Renewal date is rolled-forward one year, on receipt).
	• After 30 days, on the last calendar day of the next month, domains on unpaid transfer invoices follow the "Cleardown" process.
	• "Cleardown" process = Domains are labelled 'M' and will follow the "MSD" process.
	• The "MSD" process = Domains labelled 'M' will be MSD e-mailed on the next MSD Friday (after 1(min) and 14 days(max). If unpaid after 14 days, the domains will be suspended (for 14 days) and then deleted after a further 14 days. For deleted domains, the "credit note" process is run.
	• The "credit note" process = a credit note is raised by VAM, and is offset in Vision (manually, by Accounts staff) against the balance outstanding on the related transfer invoice.
	• The 'transfer cycle' is therefore 60 days min and 104 days max. Where 'min' = 1+30+1+14+14=60, and 'max' = 31+31+14+14+14=104.
	• The 'billing cycle' for transfers is 59 days min and 73 days max. Where 'min' = 30+1+14+14=59, and 'max' = 31+14+14+14=73.
	• "Upload/Extraction" process = 1x weekly, on average, Receipts batches are extracted (by VAM) and uploaded to the Accounts systems (Vision). Includes receipts Offline (ROF), Online (RON) and ex-Deposit (RED).
		• The pre-invoicing process = the registration authentication procedures performed by Registration Services Team. The domain does not enter "locked status",
		• A Transfer request ticket is "Admin passed", as before, however before the transfer is processed in the database, during the next rebuild, the "Invoicing/Receipting" process must run.
		• The "Invoicing/Receipting" process checks the deposit account - if there are sufficient funds, the transfer request is "financial passed" and the transfer is completed, during the next rebuild. The deposit account is reduced and the transfer invoice is raised, simultaneously.
		• If there are insufficient funds, an error e-mail is sent and the process will try 3 more times before abandoning the transfer transaction. (akin to the current "MYR" process).
		• There is no "MSD" process (because transferred domains are not invoiced until they are paid for, before the ticket application is accepted).
		• There is no "credit note" process, for the same reason.
		• The 'transfer cycle' is therefore 0 days.
		• The 'billing cycle' is 0 days.
		• "Upload/Extraction" process = tbd. Potential exists to replace the csv extractions with an XML process. To be explored with Accounts/ASD/GL System providers – DP Systems et al.
			• The practice change as described in the columns to the left will require technical changes to CRS-WEB.
			• The batch C application, which makes domain objects from ticket objects, will be deprecated.
			• Instead, for example, ticket objects will be processed by Hostmasters in CRS-WEB such that when they approve a domain, it becomes 'Admin Passed' where after, the DNS would be immediately verified by the CRS-WEB DNScheck process, where upon success, the transfer billing process within CRS-WEB would be invoked.
			• CRS-WEB details can be reviewed in the document "**CRS-WEB BPR Design Document**"
			• It is intended that the DNSCheck C programme is deprecated and that its logic is encapsulated in the core CRS-WEB application.
			• Similarly, the ACP application will be deprecated and its functionality in terms of reporting **or** manual / automatic extractions of XML/CSV receipts will be migrated to CRS-WEB.
				Pros and Cons – as above for renewals/new registrations, and in addition:-
				
				• Customers don't wait until month-end for their transfer invoice. The transaction is completed immediately, once RS complete the pre-invoicing authentication process.
				• Billing status is synchronised with the transfer status.
				• The "locked" status is discontinued.
				• MYR transactions are possible much earlier.
				• There are no restrictions or complications regarding domains already in the billing cycle. Further transactions are not restricted by pre-existing unpaid invoices.
				• Invoicing 'Sequencing' and 'Net' problems go away:-
				  o Net-off of Transfer away/Transfer back (A->B, B->C, C->D). We only invoice C->D @ EOM.
				  o Extract transfers 1st before R&R (to avoid billing old Registrar for a current monthly renewal (when its transferred and billed already to new BillC registrar).
				• There is no "MSD" process (because domains are not invoiced until they are paid for).
				• There is no "credit note" process (because domains are not invoiced until they are paid for).

Process	Current Practice	Proposed Practice	Technical Impact Assessment	Business cost-benefit analysis

• PIA (includes single year transfer, single year renewal, single year new registration).
  o Invoicing Process
  o Receipting process
  o MSD process
  o Credit note process
  o Upload/Extraction process
 	
The PIA Process applies for domains paid for in advance of the invoice date (note:- in advance of the invoice date, *not* in advance of the renewal date).
 	
The PIA Process cannot be used for multiyear transactions MYRen, MYReg, MYR(d). Registrars must use the deposit account (ADP process) see below.
 	
The PIA facility/code can only be used for any domain *outside* the billing cycle. (If the domain is in the current billing cycle, the existing invoice *must* be paid and cleared first).
 	
The PIA feature is available to Registrars on both the Console and the API.
	• Domains selected for the PIA Process must be paid-for "online" only - using credit card or deposit account (no 30 day credit terms). Use of "off-line" cheques or credit transfers is not permitted. However, off-line replenishment of deposit account is allowed (by credit transfer or by cheque).
	• Invoices are based on receipt of online cash payment – from credit card, or from deposit account. (On receipt confirmation (from Realex or deposit account) the renewal date is simultaneously rolled-forward by the appropriate number of years).
	• The "Invoicing/Receipting" process checks the deposit account - if there are sufficient funds, the request is "financial passed" and the transaction is completed, during the next rebuild. The deposit account is reduced and the PIA invoice is queued, awaiting the "Upload/Extraction" process.
	• If there are insufficient funds, an error e-mail is sent and the process will try 3 more times before abandoning the transaction. (akin to the current "MYR" process).
	• There is no "Cleardown" process (because invoices are not issued until receipt of cash payment).
	• There is no "MSD" process (because domains are not invoiced until they are paid for).
	• There is no "credit note" process, (because domains are not invoiced until they are paid for).
	• There are no refunds.
	• "Upload/Extraction" process" = 1x weekly, on average, Receipts batches are extracted (by VAM) and uploaded to the Accounts systems (Vision). Includes receipts Online (PIA).
	• Invoices are generated, printed out and snail-mailed to Registrars.
	• Invoices and receipts are posted simultaneously to Vision and offset automatically.
		• No change to the current PIA *process* is envisaged.
		• However, the meaning of 'in-advance' changes from payment in advance of *invoicing* date to payment in advance of *renewal* date.
			• The practice change as described in the columns to the left will require technical changes to CRS-API, CRS-WEB, CRS-WS-API, NRC, ACP, CP, Batch, MYRen, ClearDown & R&R Invoicing.
			• For instance, we propose that the CRS-API application will have four payment related commands deprecated.
			• A refined account:pay command will be introduced which will handle the renewal payment requests from Registrars via the API.
			• CRS-API details can be reviewed in the document "**CRS-API BPR Design Document"**
			• The clear-down procedure will be deprecated. Its logic will be refined to meet the requirements of the proposed practice such that unpaid domains which are past their renewal date will be pushed in to 'Quarantine'. Possibly a batch procedure called 'PushQ' should be introduced in to CRS-WEB which would usually be run via **cron4j** the java scheduler. Additionally, it may be the case that IEDR personnel want to manually interact with PushQ.
			• The MSD procedure will be deprecated. The changing of states of a domain in quarantine will be handled by a batch type of procedure scheduled through **cron4j** in CRS-WEB.
			• CRS-WEB details can be reviewed in the document "**CRS-WEB BPR Design Document"**
			• The requisite changes outlined above for the CRS-API imply similar changes for NRC given that we offer the same procedures via the two channels. That is to say, NRC must be refined in a similar manner. As such, CRS-WS-API will expose the CRS-API refined payment commands to NRC. NRC will require changes to layout in terms of the simplification of payments.
			• NRC details can be reviewed in the document "**NRC BPR Design Document"**
				Pros
				• The PIA terminology will be clearer. No risk of confusion (regarding payment in advance of *renewal* date vs payment in advance of *invoice* date).
				• PIA functionality can be used more frequently by Registrars (due to the R&R changes set out above).
				
				Cons
				• The PIA Process (still?) cannot be used for multiyear transactions MYRen, MYReg, MYR(d). Registrars must use the deposit account (ADP process) see below.

Process	Current Practice	Proposed Practice	Technical Impact Assessment	Business cost-benefit analysis

• ADP (includes MYRen, MYReg, single year transfer, single year renewal, single year new registration).
  o Invoicing Process
  o Receipting process
  o MSD process
  o Credit note process
  o Upload/Extraction process
 	
The ADP facility/code can only be used for any domain *outside* the billing cycle. (If the domain is in the current billing cycle, the existing invoice *must* be paid and cleared first).
 	
The PIA feature is available to Registrars on both the Console and the API. (Query).
 	
The MYR code is also used for domains tagged 'A' or 'R' by Registrars (Where 'A'= Auto Renew (every year, until further notice), and 'R'= Auto Renew (at next Renewal Date only).
	• Domains selected for the ADP Process must be paid for "online" only - using deposit account (no 30 day credit terms). Use of "off-line" cheques or credit transfers is not permitted. However, off-line replenishment of deposit account is allowed (by credit transfer or by cheque).
	• Invoices are issued on receipt of online cash payment – by deduction from the deposit account. (The renewal date is simultaneously rolled-forward by the appropriate number of years).
	• The "Invoicing/Receipting" process checks the deposit account - if there are sufficient funds, the request is "financial passed" and the transaction is completed, during the next rebuild. The deposit account is reduced and the MYR invoice is queued, awaiting the "Upload/Extraction" process.
	• If there are insufficient funds, an error e-mail is sent and the process will try 3 more times before abandoning the transaction.
	• There is no "Cleardown" process (because invoices are not issued until receipt of cash payment).
	• There is no "MSD" process (because domains are not invoiced until they are paid for).
	• There is no "credit note" process, (because domains are not invoiced until they are paid for).
	• There are no refunds.
	• "Upload/Extraction" process" = 1x weekly, on average, Receipts batches are extracted (by VAM) and uploaded to the Accounts systems (Vision). Includes receipts using Deposit account (ADP).
	• Invoices and receipts are posted simultaneously to Vision and offset automatically.
		• No change to the current ADP process is envisaged.
		• Q:- the programming code may need to be changed to reflect payment from deposit account in advance of the *renewal* date, rather than in advance of the *Invoicing* date. The look-up criteria would be different – "has the renewal date passed?" vs "is there an invoice in the system already?").
		•
			• The practice change as described in the columns to the left will require technical changes to CRS-API, CRS-WEB, CRS-WS-API, NRC, ACP, CP, Batch, MYReg, MYRen, ClearDown & R&R Invoicing.
			• For instance, we propose that the CRS-API application will have four payment related commands deprecated.
			• A refined account:pay command will be introduced which will handle the renewal payment requests from Registrars via the API.
			• CRS-API details can be reviewed in the document "**CRS-API BPR Design Document**"
			• The clear-down procedure will be deprecated. Its logic will be refined to meet the requirements of the proposed practice such that unpaid domains which are past their renewal date will be pushed in to 'Quarantine'. Possibly a batch procedure called 'PushQ' should be introduced in to CRS-WEB which would usually be run via **cron4j** the java scheduler. Additionally, it may be the case that IEDR personnel want to manually interact with PushQ.
			• The MSD procedure will be deprecated. The changing of states of a domain in quarantine will be handled by a batch type of procedure scheduled through **cron4j** in CRS-WEB.
			• CRS-WEB details can be reviewed in the document "**CRS-WEB BPR Design Document**"
			• The requisite changes outlined above for the CRS-API imply similar changes for NRC given that we offer the same procedures via the two channels. That is to say, NRC must be refined in a similar manner. As such, CRS-WS-API will expose the CRS-API refined payment commands to NRC. NRC will require changes to layout in terms of the simplification of payments.
			• NRC details can be reviewed in the document "**NRC BPR Design Document**".
			• MYReg & MYRen procedures will be incorporated in CRS-WEB.
				Pros
				• The ADP terminology will be clearer. No risk of confusion (regarding payment in advance of *renewal* date vs payment in advance of *invoice* date).
				• ADP functionality can be used more frequently by Registrars (due to the R&R changes set out above).
				
				Cons
				• None.

	API Commands			Impacted by BPR proposals ??			
				No	Yes	TBD	
contacts	contact create			x			
contacts	contact info			x			
contacts	contact modify			x			
contacts	contact query admin			x			
contacts	contact query all			x			
contacts	contact query tech			x			
Authentication	login			x			
Authentication	logout			x			
Domains	domain autocreate			x			
Domains	domain check			x			
Domains	domain create			x			
Domains	domain delete			x			
Domains	domain info			x			
Domains	domain modify			x			
Domains	domain modify autorenew			x			
Domains	domain msd			x			
Domains	domain msdcancel			x			
Domains	domain query all			x			
Domains	domain query all contact			x			
Domains	domain query all contact contacttype			x			
Domains	domain query transfer			x			
Domains	domain transfer			x			
Domains	domain transfer using defaults			x			
Payments	account pay check deposit			x		TBD	
Payments	account pay deposit funds			x		TBD	
Payments	account pay from deposit	R&R - Renewal in Adv	ADP		x		Change = renewal in advance of renewal date (rather than in advance of Invoicing)
		R&R - Renewal Invoice	RED		x		Defunct. No more unpaid renewal invoices.
		R&R - Renewal Future	ADP	x		TBD	
		MYRen(d)	ADP		x		Change = no longer any restriction about being outside the billing cycle (TBD)
		R&R - New Reg in Adv	ADP		x		Change = renewal in advance of new reg date (rather than in advance of Invoicing)
		R&R - New Reg Invoice	RED		x		Defunct. No more new unpaid reg invoices.
		MYReg(d)	ADP		x		Change = no longer any restriction about being outside the billing cycle (TBD)
		Transfer Invoice	RED		x		Defunct. No more unpaid transfer invoices.
		Transfer in Adv	ADP		x		Change = renewal in advance of transfer date (rather than in advance of Invoicing)
Payments	account pay msdReActivation				x		No need to look up invoiced values anymore. Look up pricing table instead.
Payments	account pay msdReActivation payFromDeposit					TBD	
Payments	account pay offline				x		Defunct. No more pay offline allowed.
Payments	account pay online	R&R - Renewal in Adv	PIA		x		Change = renewal in advance of renewal date (rather than in advance of Invoicing)
		R&R - Renewal Invoice	RED		x		Defunct. No more unpaid renewal invoices.
		R&R - Renewal Future	PIA	x		TBD	
		R&R - New Reg in Adv	PIA		x		Change = renewal in advance of new reg date (rather than in advance of Invoicing)
		R&R - New Reg Invoice	RED		x		Defunct. No more new unpaid reg invoices.
		Transfer Invoice	RED		x		Defunct. No more unpaid transfer invoices.
		Transfer in Adv	XFER		x		Change = renewal in advance of transfer date (rather than in advance of Invoicing)
Tickets	ticket delete			x			
Tickets	ticket info			x			
Tickets	ticket modify			x			