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# Willamette Ecosystem Marketplace Framework

December 13, 2006



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# Willamette Ecosystem Marketplace Framework

*Preliminary Draft* Prospectus for the  
Willamette Ecosystem Bank & Exchange

# Willamette Ecosystem Bank & Exchange

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💧 Rationale

💧 Concept



💧 Creation and Implementation

# Rationale

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- 💧 Needs, problems, challenges in getting started
  - ◆ technical and scientific gaps
  - ◆ no dependable regulatory framework
  - ◆ no credit standards, no transaction rules
  - ◆ how do buyers and sellers find each other?
  - ◆ how do deals get done?
  - ◆ no automatic monopoly—who is first to serve?
  - ◆ centralize, herd the cats, everybody on their own?

# Rationale

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## 💧 Solution:

- ◆ Credit Standards
  - State Endorsed
  - Regulator Approved
  - Trader Accepted
- ◆ Deal Facilitation Mechanisms
  - Efficient
  - Cost-effective
  - Credible

*Unifying  
features set  
market  
cornerstone*

# Concept: "WillamEX"

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- Administrative and electronic marketplace for ecosystem-related credits in Willamette River Basin
- Registry and trading system for pollutant reductions and other targeted improvements/benefits
- Pre-approved, standardized units to bank & exchange
  - ◆ e.g., kcals, wetland functions, habitat types, other
- Self-regulated entity according to operating rules and policies developed with key partners
- Documents progress and benefits of regulatory and voluntary actions versus targets

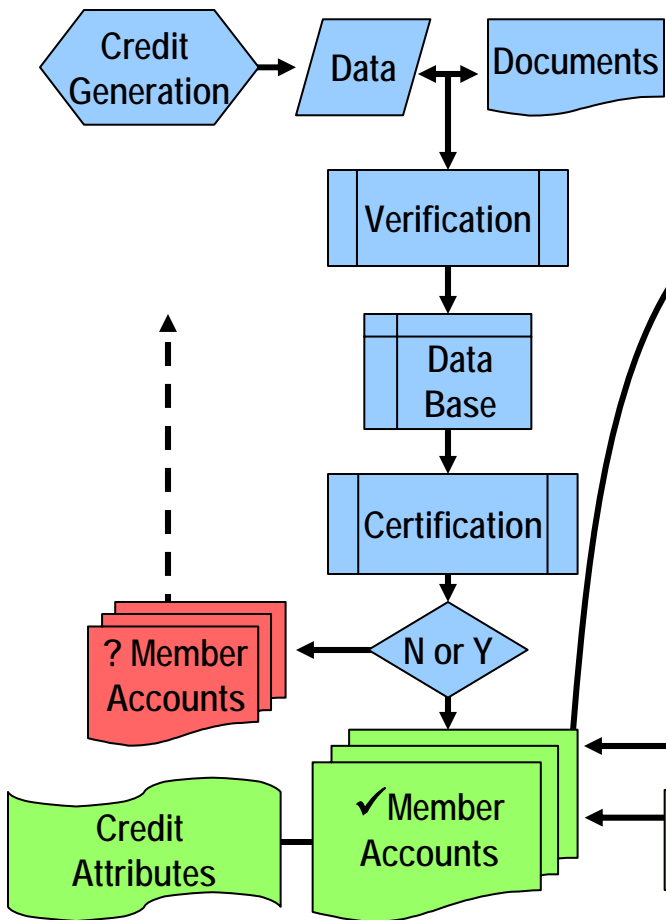
# Concept: WillamEX Goals

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- 💧 Help credit buyers and sellers find each other
- 💧 Create financial incentives for voluntary restoration
  - ◆ ecosystem benefits bankable, tradable, monetary value
- 💧 Facilitate efficient exchanges with pre-approved credit verification and certification procedures
- 💧 Credit standards ensure credibility of the commodities for the protection of the participants
- 💧 Help educate public about restoration needs and opportunities for beneficial action

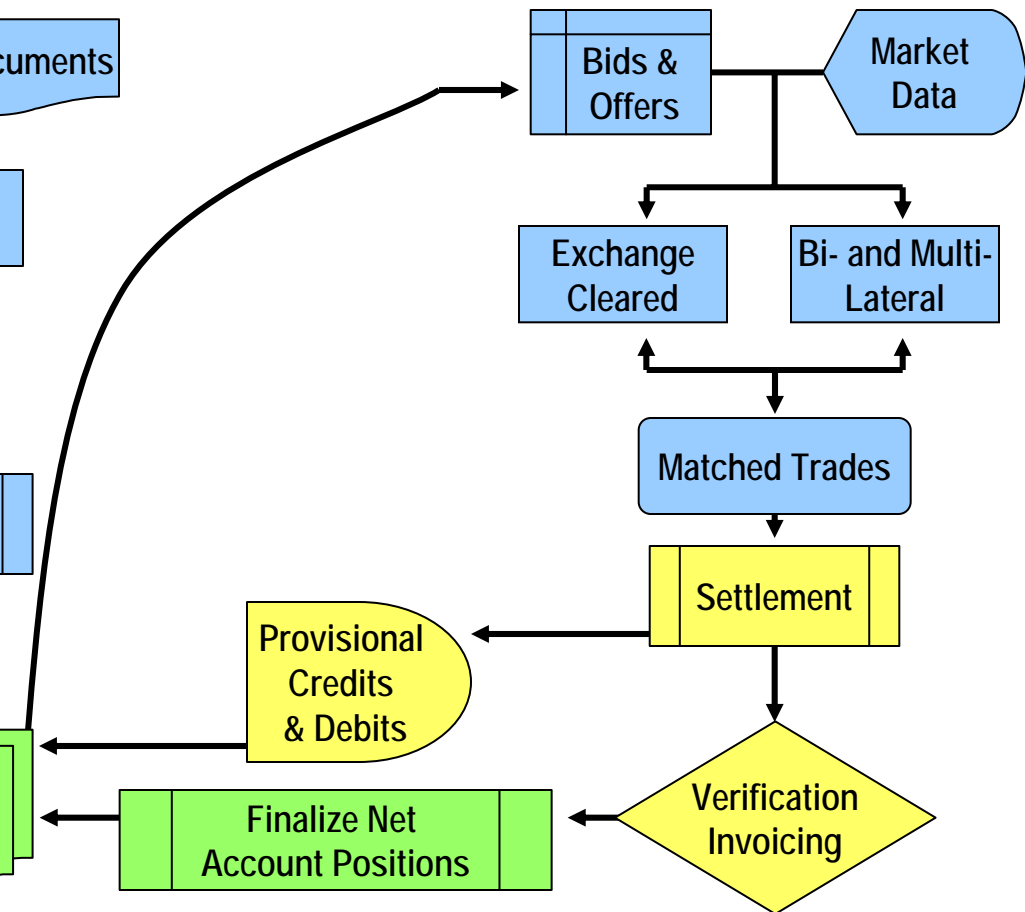
# Concept: WillamEX Platforms

## WillBR Bank & Registry



DAVID EVANS and ASSOCIATES

## WillMa Marketplace



THE WILLAMETTE PARTNERSHIP

CH2M HILL

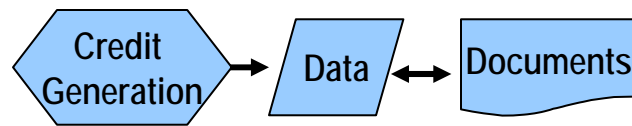
# WillBR

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- Secure web-site\* and database system
- Official repository of credits created and purchased by WillamEX Account Holders
- Membership required

# WillBR

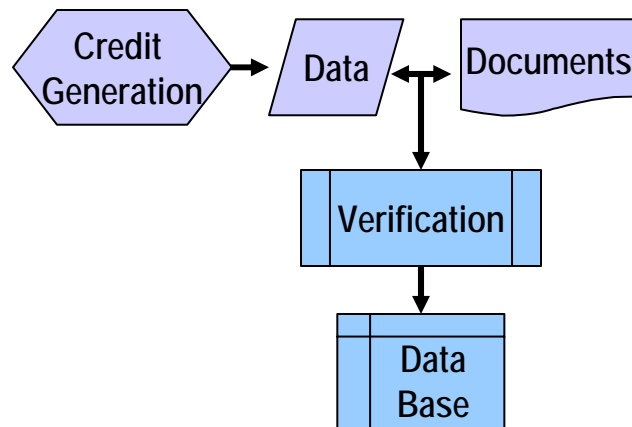
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- Members generate credits and prepare proof

# WillBR

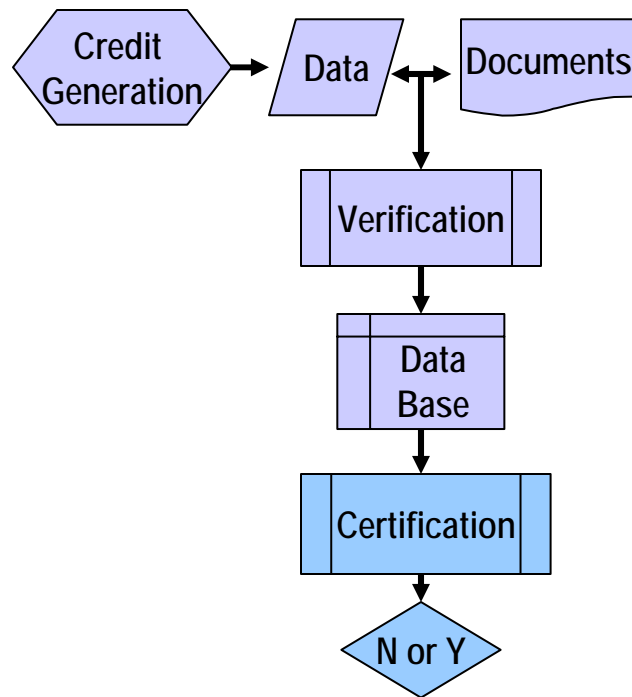
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- Members generate credits and prepare proof
- Credits are verified per rules and entered in registry

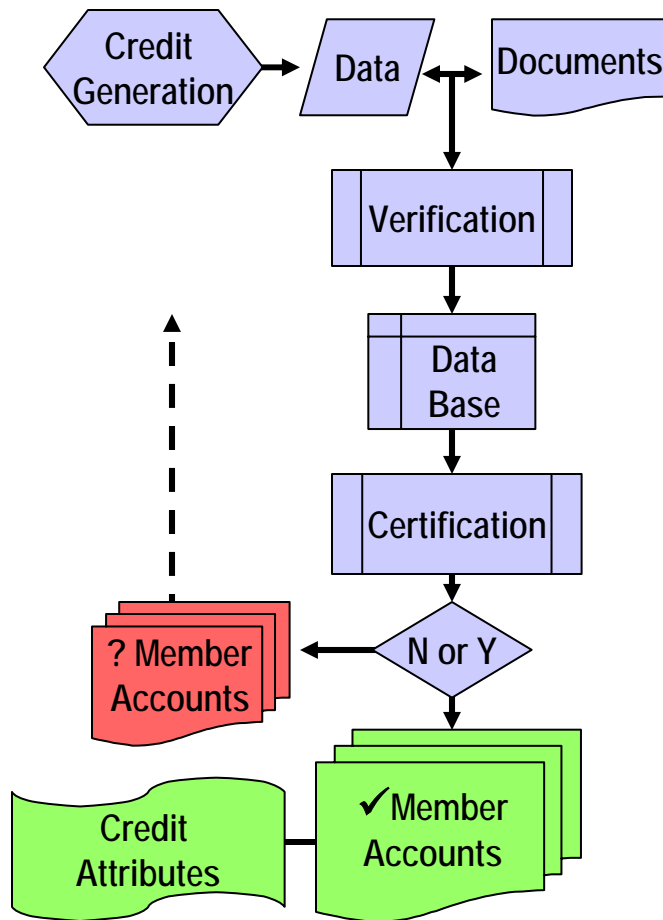
# WillBR

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- Members generate credits and prepare proof
- Credits are verified per rules and entered in registry
- WillamEx grants or denies certification per rules

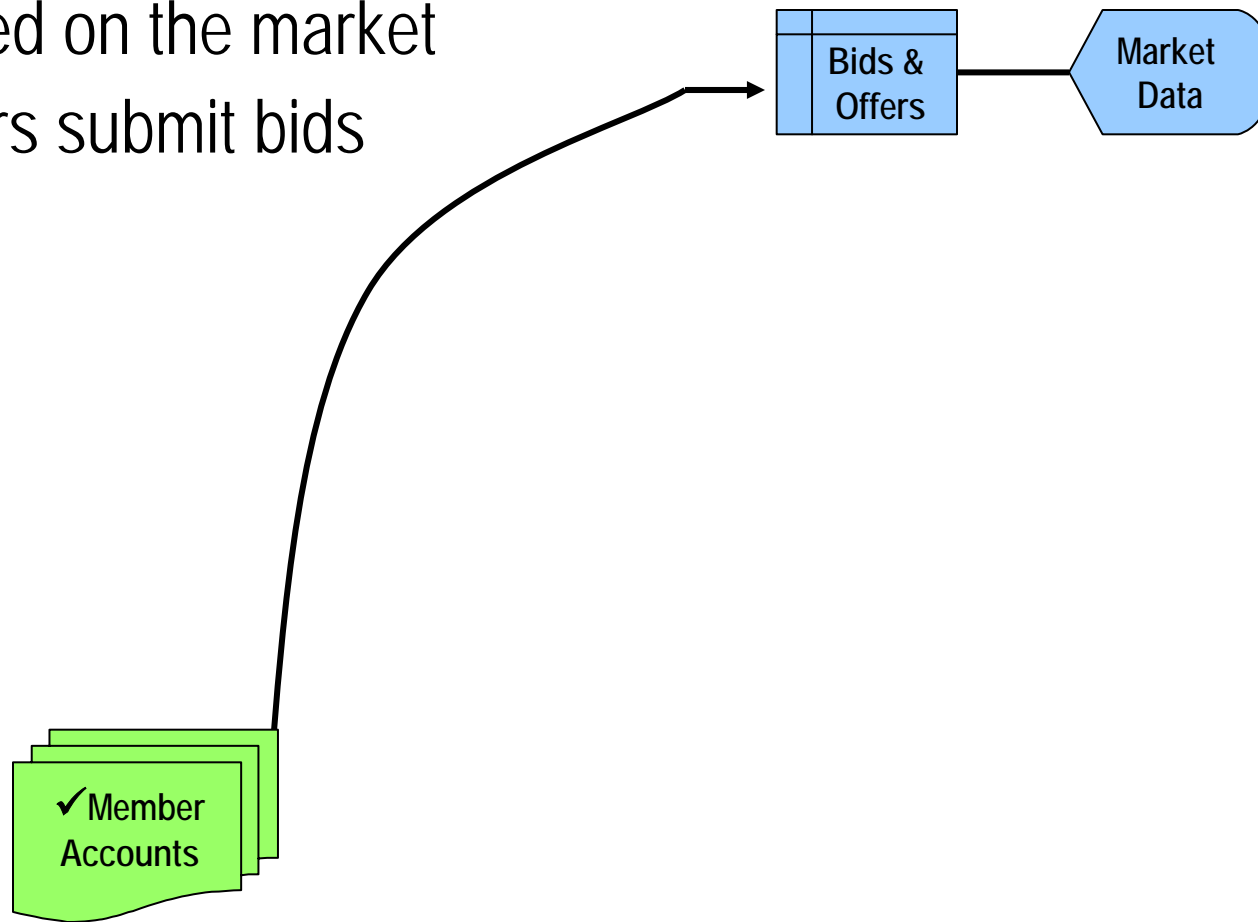
# WillBR



- Members generate credits and prepare proof
- Credits are verified per rules and entered in registry
- WillamEx grants or denies certification per rules
- Denied credits return to verification or documentation
- Certified credits deposited into Member accounts

# WillMa

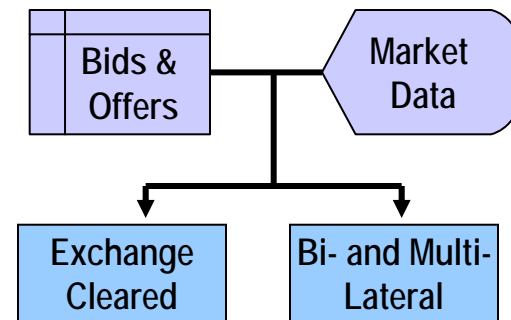
- Certified credits may be banked or offered on the market
- Members submit bids



# WillMa

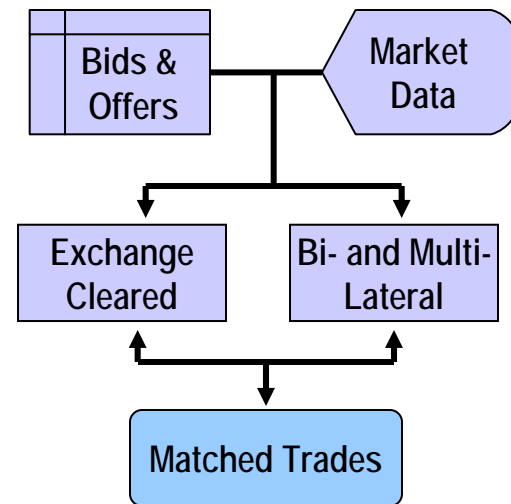
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- Certified credits may be banked or offered on the market
- Members submit bids
- Anonymous or negotiated trades supported



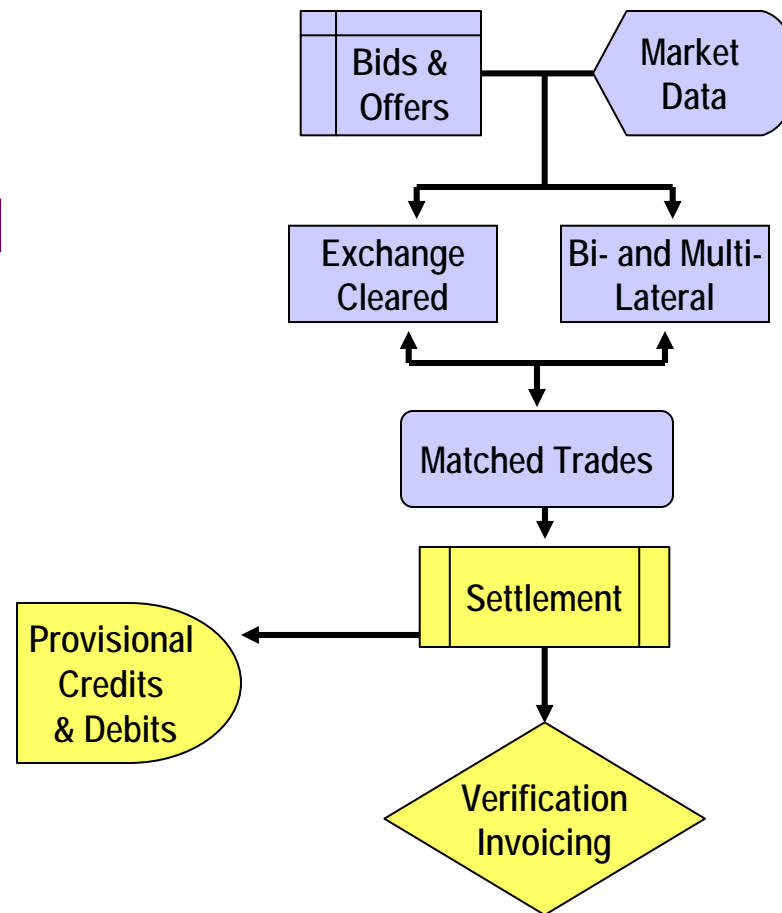
# WillMa

- Certified credits may be banked or offered on the market
- Members submit bids
- Anonymous or negotiated trades supported
- Bids and offers matched based on key attributes



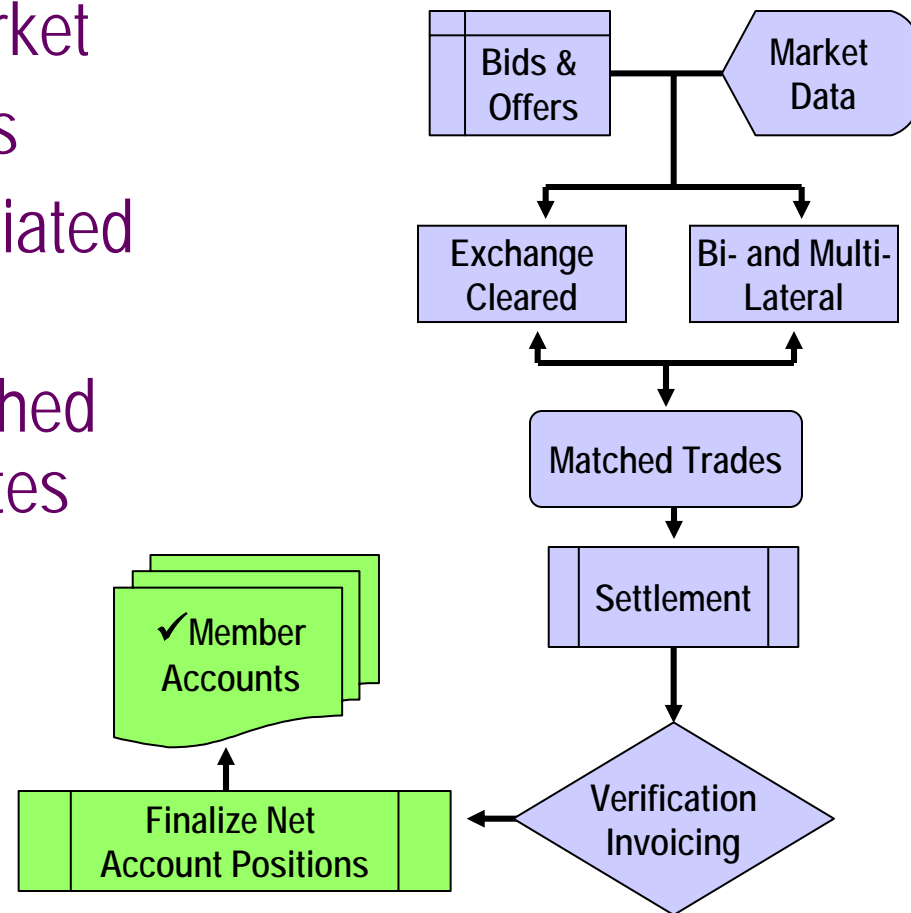
# WillMa

- Certified credits may be banked or offered on the market
- Members submit bids
- Anonymous or negotiated trades supported
- Bids and offers matched based on key attributes
- Trades processed for settlement



# WillMa

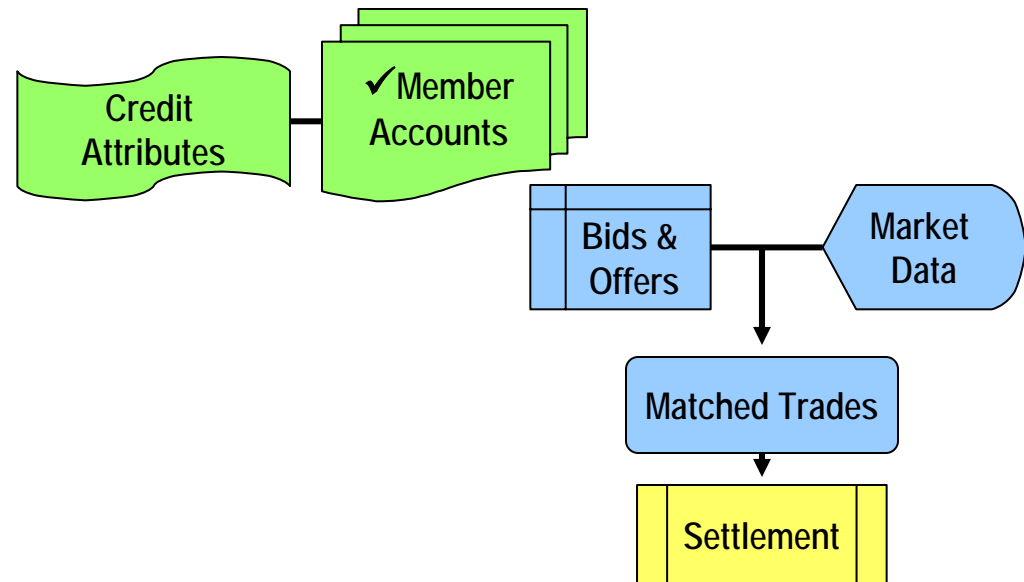
- Certified credits may be banked or offered on the market
- Members submit bids
- Anonymous or negotiated trades supported
- Bids and offers matched based on key attributes
- Trades processed for settlement
- Accounts reconciled



# Reporting

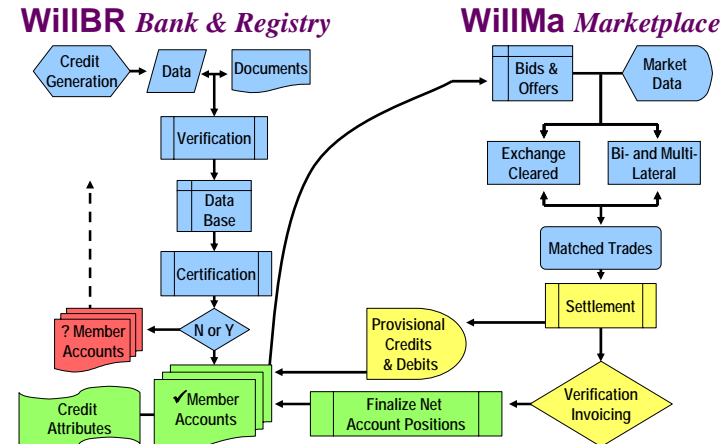
## Individual Members

- ◆ Registry accounts
- ◆ Trading activities
- ◆ Own use, regulatory
- ◆ Pre-set or custom



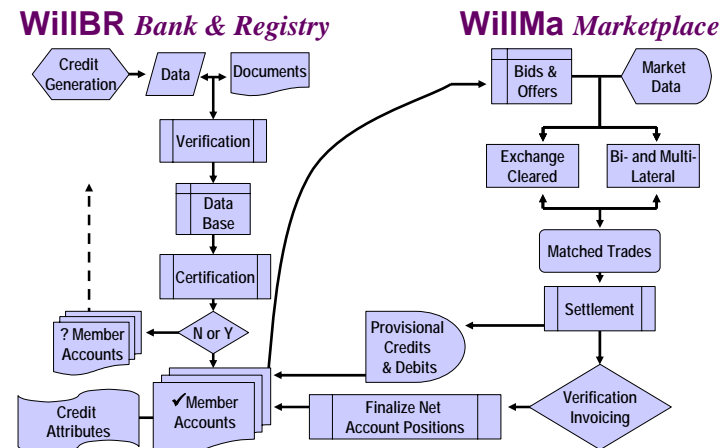
# Reporting

- 💧 Individual Members
- 💧 Marketplace Collective
  - ◆ Consolidated summaries
  - ◆ For member benefit
  - ◆ For regulators' convenience
  - ◆ Negotiated with authorities
  - ◆ Agreed to by members



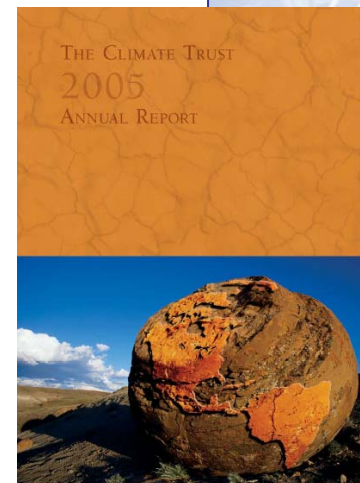
# Reporting

- Individual Members
- Marketplace Collective
- WillamEX Operations, Management, Auditing
  - WillBR and WillMa
  - QA/QC
  - Oversight
  - Continuous improvement
  - Confidential per rules



# Reporting

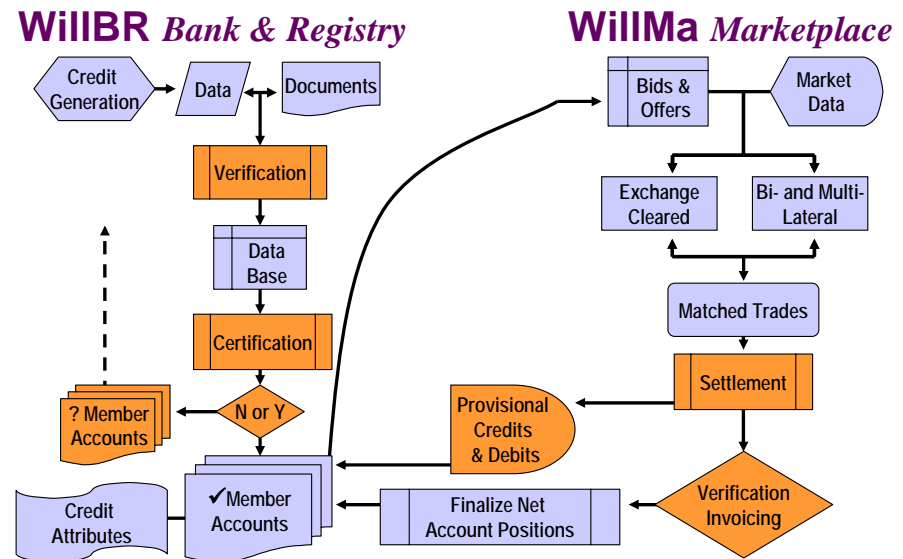
- 💧 Individual Members
- 💧 Marketplace Collective
- 💧 WillamEX Operations, Management, Auditing
- 💧 Periodic Member and Public Reports
  - ◆ Annual Report
  - ◆ Quarterly Newsletter
  - ◆ Monthly Summaries



# Credit Verification & Certification

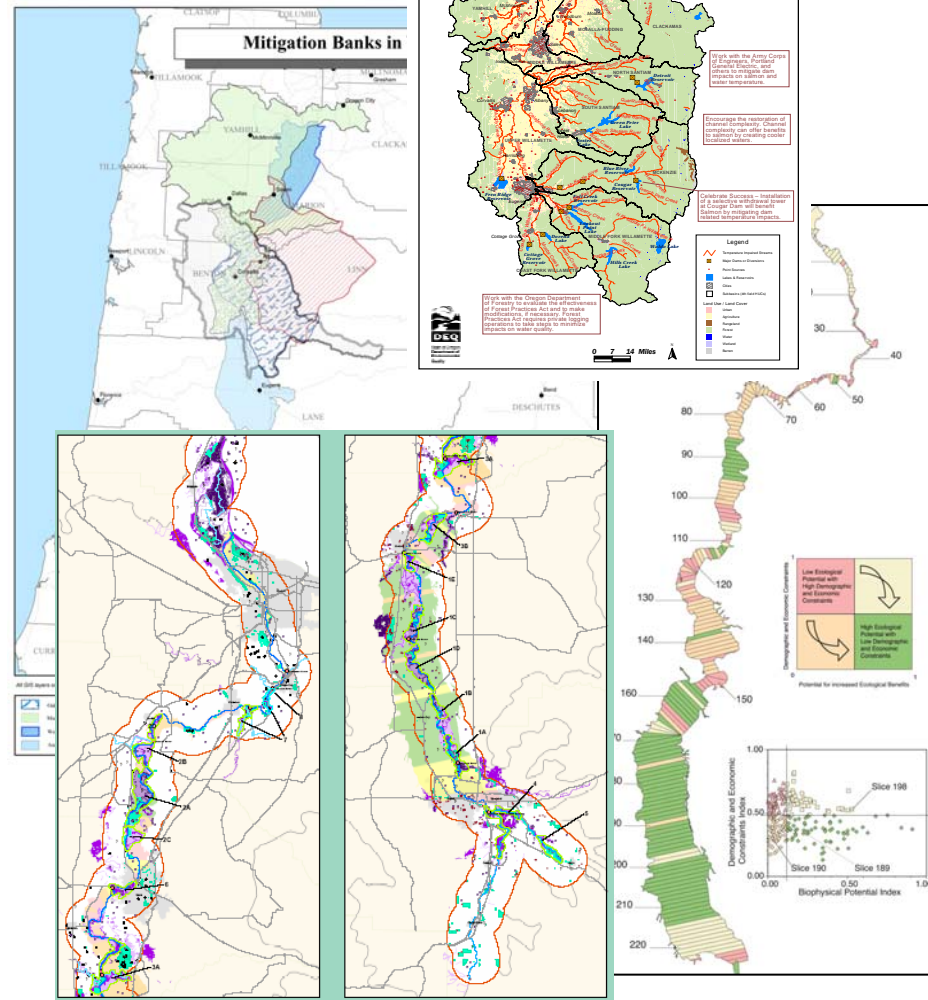
- ✓ Members responsible for arranging verification
- ✓ Self-verification by affirmation and proof
- ✓ WillamEx certifies verified credits for account deposit
- ✓ Procedures negotiated with regulators

- ✓ Most credits will need periodic re-verification, re-certification



# Credit Recruitment

- 💧 Identify priority credit creation opportunities market not incentivizing
  - ◆ GIS-based system of priority restoration and project opportunities maintained by Partnership and members
  - ◆ Governed by pre-set policies and rules
  - ◆ Disclosure requirements may apply



# Public Outreach and Education

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- Committed to broadening understanding of challenges and opportunities
- WillamEx-hosted forums and seminars
- Publications and events posted website, mailings
- Member-sponsored activities also promoted and links provided

# Relationship with Regulatory Agencies

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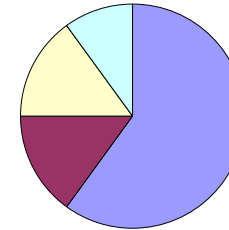
- Collaborated with cognizant authorities to develop
  - ◆ Overall marketplace structure
  - ◆ Standards for credits, verification, and certification
- Agreements, roles, and responsibilities memorialized in key documents
- Enables pre-approved process signatory agencies accept with no further documentation
- Some agencies Founding Members, account holders
- Conveys no regulatory authority to WillamEx

# Member Services

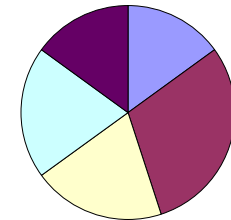
## Technical

- ◆ individual credit portfolio analysis and investment strategies
- ◆ site planning and engineering
- ◆ credit estimations
- ◆ cost and financial analyses
- ◆ modeling, sampling, monitoring
- ◆ performance assessments

Demand



Supply



Trib/NPS Credit Category	2006	2007	2008
<b>Upper Mission</b>	<b>7,826</b>	<b>872</b>	<b>48,722</b>
Point Source Credits	59,001	57,445	55,944
Urban BMP Credits	64,523	64,523	64,523
Agricultural BMP Credits	207,344	207,344	207,344
Resource Credits	2,888	2,888	2,888
<b>Palouse/Flank</b>	<b>7,826</b>	<b>872</b>	<b>48,722</b>
Point Source Credits	59,001	57,445	55,944
Urban BMP Credits	64,523	64,523	64,523
Agricultural BMP Credits	207,344	207,344	207,344
Resource Credits	2,888	2,888	2,888
<b>Lower Mission</b>	<b>7,826</b>	<b>872</b>	<b>48,722</b>
Point Source Credits	59,001	57,445	55,944
Urban BMP Credits	64,523	64,523	64,523
Agricultural BMP Credits	207,344	207,344	207,344
Resource Credits	2,888	2,888	2,888
<b>Palouse</b>	<b>(123,402)</b>		
Point Source Credits	7,701	80,400	
Urban BMP Credits	64,523	194,421	
Agricultural BMP Credits	19,779	194,287	
Resource Credits	2,212	4,300	
<b>Upper Palouse</b>	<b>161,336</b>		
Point Source Credits	4,414	540,952	
Urban BMP Credits	64,427	14,020	
Agricultural BMP Credits	11,613	16,547	
Resource Credits	18,111	1,028	
<b>Lower Palouse</b>	<b>161,336</b>		
Point Source Credits	4,414	540,952	
Urban BMP Credits	64,427	14,020	
Agricultural BMP Credits	11,613	16,547	
Resource Credits	18,111	1,028	
<b>Lower Flank</b>	<b>11</b>	<b>5,446</b>	
Point Source Credits	11	18,027	
Urban BMP Credits	69,390	16,570	
Agricultural BMP Credits	7,139	159,296	
Resource Credits	33,134	1,021	
<b>Chopack</b>	<b>1</b>	<b>5,446</b>	
Point Source Credits	1	18,027	
Urban BMP Credits	75,131	42,835	
Agricultural BMP Credits	3,101	734,761	
Resource Credits	74,927	16,143	



# Member Services

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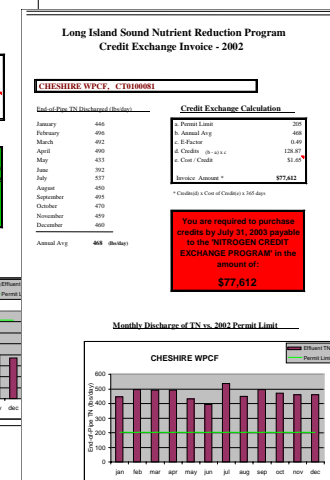
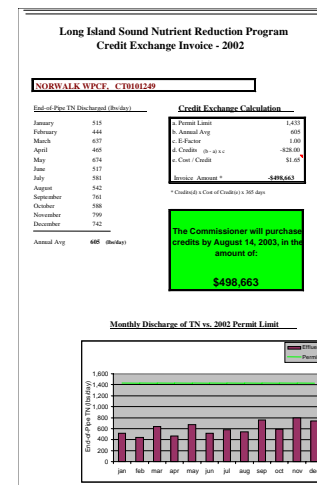
- ◆ Outreach and Education
  - ◆ identification of recommended opportunities and mechanisms
  - ◆ preparation of collateral materials
  - ◆ logistical and other support for meetings, seminars, and other forums and media events



# Member Services

- ◆ Credit Package Submittals
  - ◆ bundled services to prepare credit registration documents
- ◆ Credit Verification
  - ◆ performing specific verification function, according to established procedures, to register verified credits that pass certification audit

The image shows two forms from the Lower Basin River Watershed. The top form is a 'REDUCTION CREDIT CERTIFICATE' and the bottom one is a 'TRADE NOTIFICATION FORM'. Both forms have sections for permit holder information, monitoring methods, and trade details. The 'TRADE NOTIFICATION FORM' has a section for 'TO BE COMPLETED BY THE USER' and another for 'TO BE COMPLETED BY OTHER PARTY'.



# Ecosystem Benefits

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- 💧 Meet goals more quickly and cost-effectively
- 💧 Direct actions to priorities
- 💧 Improvements support sustainable living communities



# Member Benefits

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- Save time and money
  - ◆ regulatory compliance
  - ◆ gain financial reward
- Pre-approved by regulatory agencies
- Access to market information for planning and decision-making
- One stop shopping for multiple trading partners
- Convenient tracking and reporting tools minimizes administrative effort
- Ready access to technical assistance and peer support



# Steps to Create WillamEx

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1. Agreements in principle with regulators and legislation
2. Confirm sufficient participation
3. Chartering WillamEx entity
4. Credit Standards
5. Verification standards
6. Certification standards
7. Initial marketplace architecture
8. Accreditation
9. Rules and Policies
10. Business Plan: Model and Funding
11. Approvals and Endorsements

# 1. Agreement in Principle with Regulatory Agencies and Other Authorities

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- Whose support is critical?
  - Review, comment, revise Prospectus
  - Draft Memoranda of Understanding to secure commitment to concept
  - Oregon Administrative Rule to legitimize effort
- Where are we now?
    - ◆ Started discussions with DEQ re credit definitions and permitting issues
    - ◆ Informational meetings held with others: DSL, USFWS, NFWF, USGS, USEPA
    - ◆ Need to initiate formal process to get agreements

## 2. Confirmation of Sufficient Member Participation

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- 💧 If WillamEx is offered, what is expected level of participation?
  - ◆ By credit type
  - ◆ Trade frequency
  - ◆ Credit volume
  - ◆ Number of traders
- 💧 Where are we now?
  - ◆ Market appraisal identified categories of demand and priority locations, e.g., kcals and wetlands
  - ◆ Some formal and informal interviews part of appraisal and ongoing outreach
  - ◆ Need more quantification of market demand and specific discussions re WillamEx with prospective participants

# 3. Chartering a WillamEx

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- What is best corporate structure for this entity?
  - What are options under Oregon law?
  - Advantages and disadvantages of choices?
  - Political, strategic, financial, liability considerations
- Where are we now?
    - ◆ Identified different operational models
    - ◆ Some discussions about whether a new organization is needed to perform some market functions
    - ◆ Need to launch political and legal discussions and evaluation to develop recommendation

# 4. Credit Standards

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- Procedures and protocols for credits
  - ◆ estimating
  - ◆ calculating
  - ◆ modeling
  - ◆ documenting
  - ◆ monitoring
  - ◆ evaluating
- Negotiate with cognizant regulatory agencies
- Publish in easy to understand and use format
- Where are we now?
  - ◆ Kcal credit/debit method being documented via CWS
  - ◆ Other credit definitions under development
  - ◆ Some gaps will still exist after scoped work complete
  - ◆ Need to develop specific proposals, get approval, prepare guidances

# 5. Verification Standards

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- Procedures and protocols to verify credits for acceptance by WillamEx
  - ◆ Independent verification
  - ◆ Training
  - ◆ Accreditation
- Negotiate with cognizant regulatory agencies
- Where are we now?
  - ◆ Some of this part of Credit Standards—verification is about auditing the standards
  - ◆ Auditing process needs to be established and auditors lined up and readied

# 6. Certification Standards

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- WillamEx staff and technical consultants need to review and audit the independent credit verifications
- Provides additional level of credibility to credit quality
- Develop in consultation with regulatory agencies and participants
- Where are we now?
  - ◆ Much guidance drawn directly from credit standards and verification standards
  - ◆ Certification audits the verification and makes a credit real, bankable, and tradable
  - ◆ Need to develop standards, get endorsement, and put in place

# 7. Initial Marketplace Architecture

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- Alternative manual, electronic, and web-based platforms for WillamEx: WillBR & WillMa

- Criteria

- ◆ ease of use
- ◆ time to readiness
- ◆ cost to develop
- ◆ functionality and access
- ◆ resources needed to operate and maintain
- ◆ immediate needs and future potential

- Where are we now?

- ◆ Have documented some different examples in Market Framework deliverables to date
- ◆ Marketplace creation task provides for further evaluation of options and development of a prototype
- ◆ Will need to select preferred architecture, draft blueprint, and build it

# 8. Accrediting Verifiers and Pre-Qualifying Other Service Providers

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- WillamEx and members launch effort to recruit and accredit qualified credit verifiers following completion of standards
- Separate process developed and launched to identify and pre-qualify range of firms, non-profits, and others to provide key member support services
- Where are we now?
  - ◆ Some of verifier accreditation will overlap with Steps 4 and 5
  - ◆ Involve prospective candidates in standards development
  - ◆ Partnership already familiar with consultant roster process
  - ◆ Coordinate efforts with outreach, education, and member recruitment

# 9. Rules and Policies

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- Verification & Certification
  - Membership agreements
  - WillamEx operations
  - Participation in Registry and Exchange
  - Credit recruitment
  - Expected roles and responsibilities
  - Binding commitments
  - Enforcement
  - Reporting requirements
- Where are we now?
    - ◆ Some ingredients included in other steps
    - ◆ Actions needed to complete this step will necessarily follow completion of previous steps

# 10. Business Plan

## Business Model & Funding Mechanisms

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- Consistent with type of organization chartered, identify:
  - ◆ Expenses and liabilities
  - ◆ Revenues and assets
- Due diligence must provide confidence that the proposed enterprise can be launched and sustained
- Where are we now?
  - ◆ Some discussions about alternative business models and funding sources have already occurred and more are planned
  - ◆ Formal plan must be developed and endorsed

# 11. State/Regulatory Approvals, Enablers, Endorsements, Anointments

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- Formal legal and other mechanisms to convey upon WillamEx the necessary authority to incorporate and operate
  - ◆ according to the set of governing agreements, rules, and policies
- Drafted, negotiated, and duly executed
- We are not here yet
  - ◆ Many of the building blocks will come out of other steps

*This step lays  
the market  
cornerstone*