

# Seoul Tax Information System

**SEOUL,  
READY TO  
SHARE  
WITH THE WORLD!**

**Seoul  
Tax Information  
System  
without time or space  
constraints**



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# SEOUL TAX INFORMATION SYSTEM

**Taxes are essential financial resources  
for building cities in which all  
citizens can happily live together.**

Seoul has operated high-tech  
integrated tax information since the  
intelligence tax information system  
was built in 1999 to create a tax  
environment that is convenient for  
taxpayers and is administratively  
efficient. As of 2016, Seoul's tax  
collection rate is as high as 92.2%

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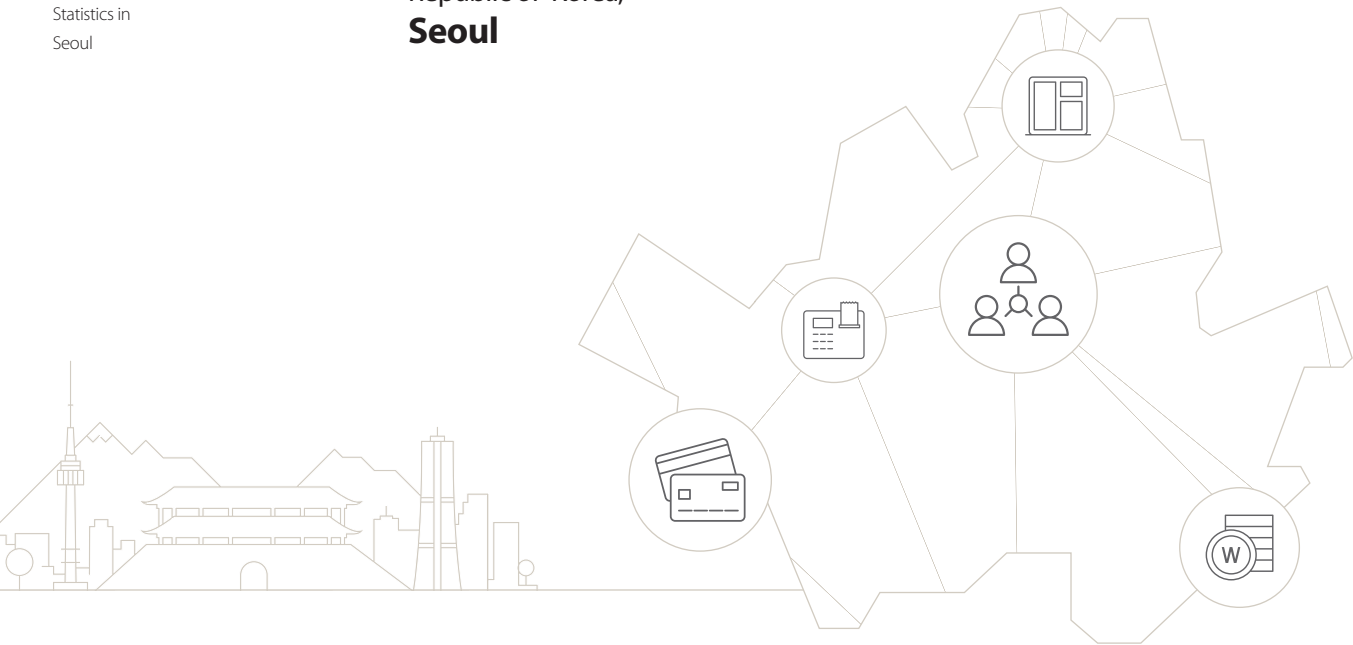
## Benefits of the Seoul Tax Information System

More than 30 years of technological development  
and innovation has led to bulk processing of tax  
data and efficient utilization of human resources.  
This system has greatly contributed to the  
advancement of tax administration by inducing  
tax compliance and enabling timely taxation.

# Tax-related Statistics in Seoul

Tax-related  
Statistics in  
Seoul

Republic of Korea,  
Seoul



Amount of  
local tax collection  
(Million KRW)

19,007,079

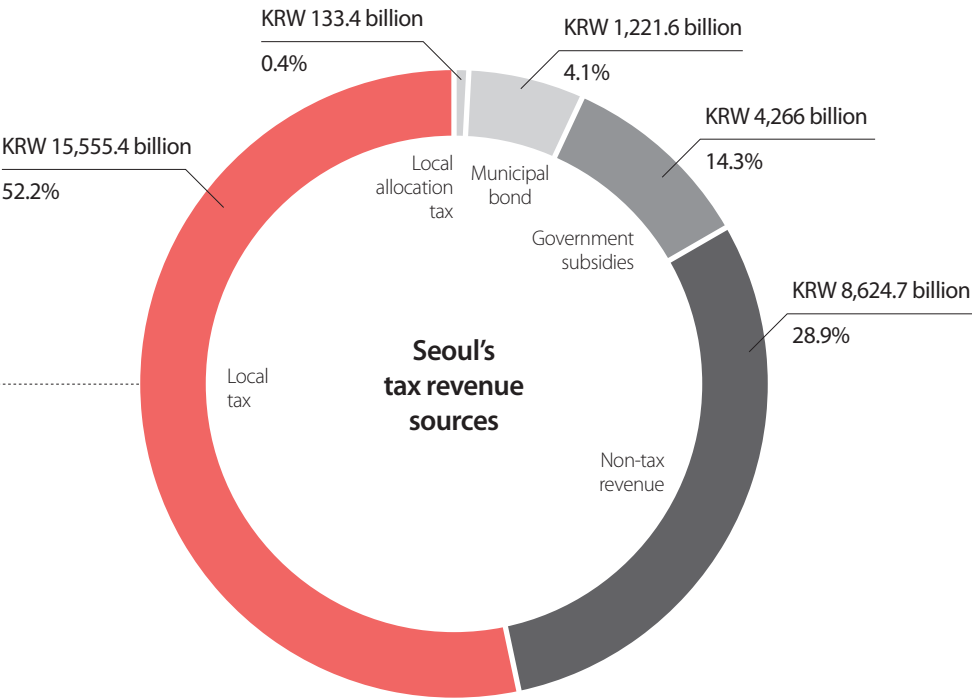
Amount of local tax exemption and reduction  
KRW 2,624,519 million

Seoul's fiscal self-reliance ratio  
80.5% - (Local tax + Non-tax revenue) / General account budget sum × 100

Cases imposed annually  
0.1 billion cases

SEOUL, READY TO SHARE WITH THE WORLD!

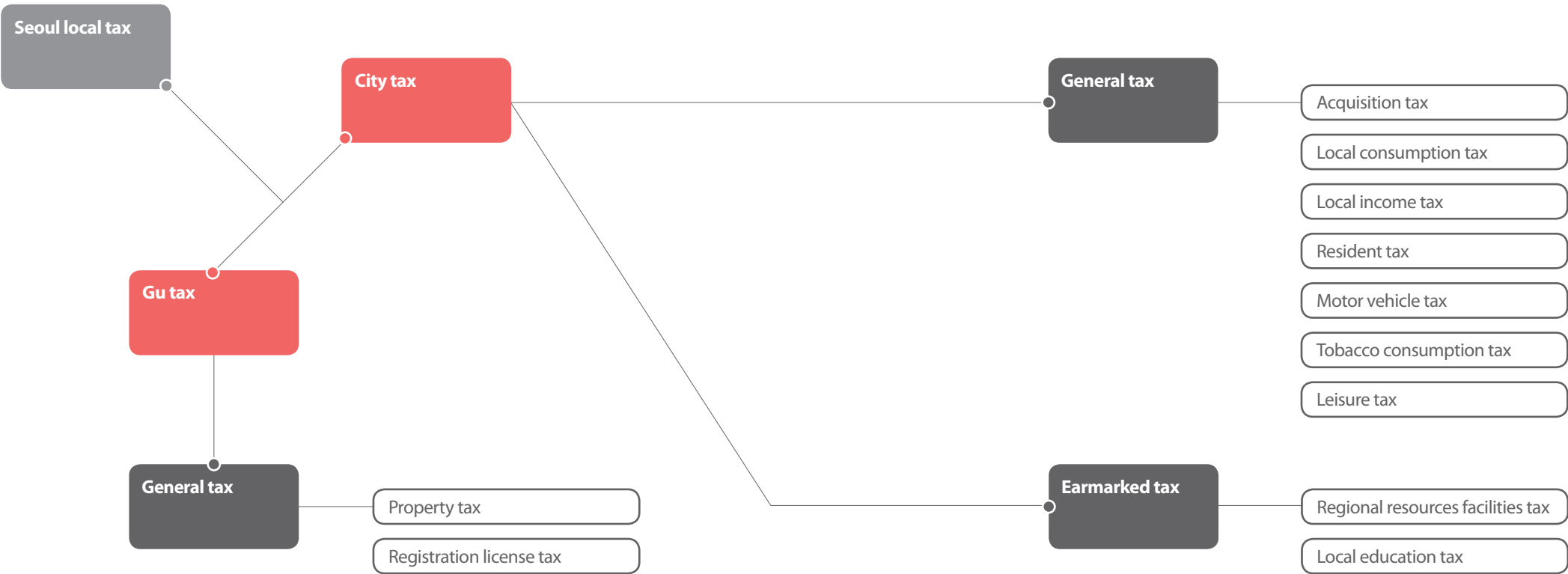
Population (Persons)	10,178,395	Number of buildings (buildings)	628,947
Number of taxpayers (Persons)	6,500,000	Number of houses (houses)	2,793,244
Land area (km <sup>2</sup> )	605	Number of registered cars (Cars)	3,112,120



# Types of Seoul Local Taxes and Composition of Tax Revenues

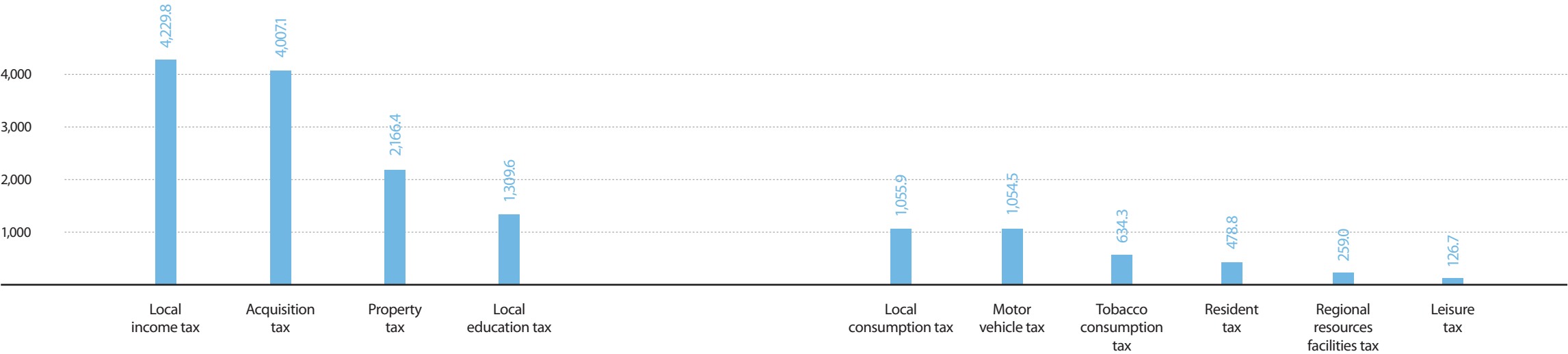
SEOUL, READY TO SHARE WITH THE WORLD!

Types of Seoul  
Local Taxes and  
Composition of  
Tax Revenues



Size of Seoul's tax revenue budget

Unit : billion won

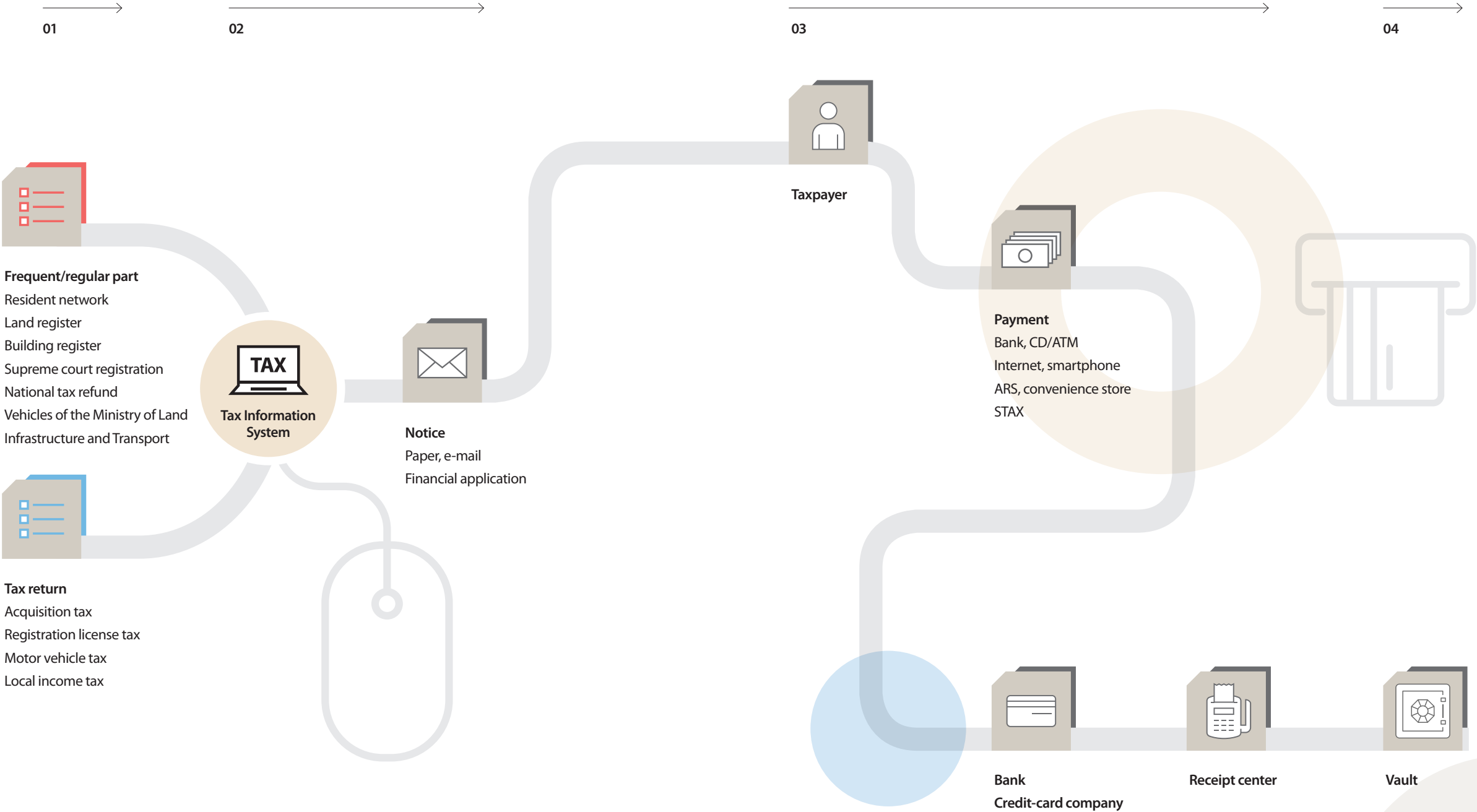




# Flow Chart of Seoul Local Tax Imposition and Payment

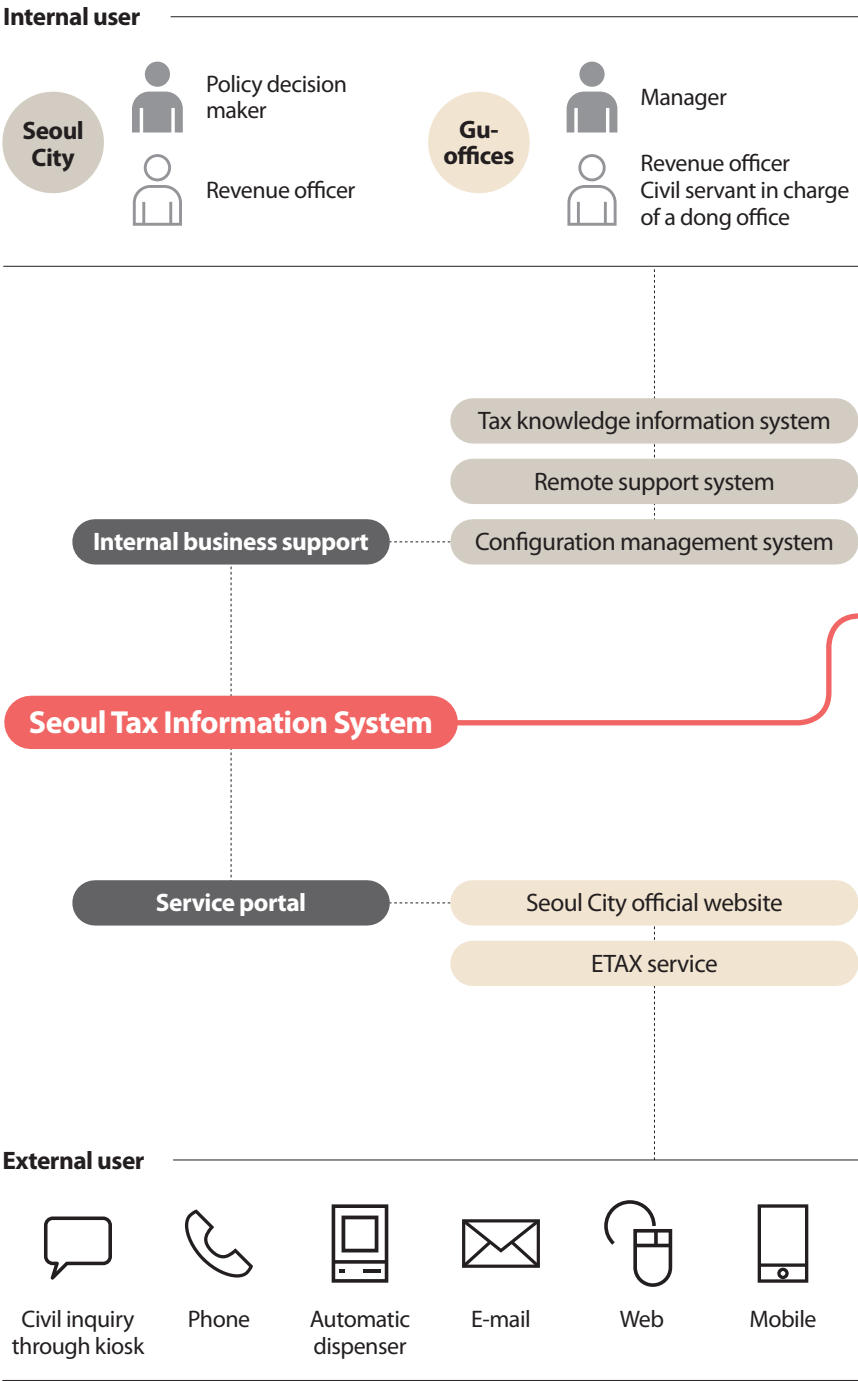
SEOUL, READY TO SHARE WITH THE WORLD!

Flow Chart of  
Seoul Local Tax  
Imposition and  
Payment



# A Quick Look at the Seoul Tax Information System

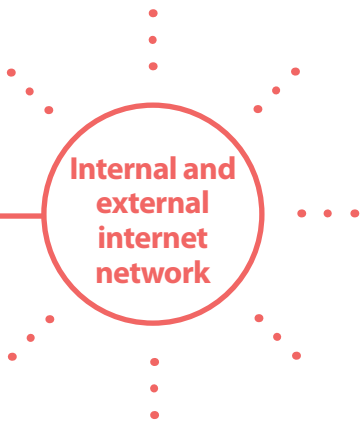
A Quick Look  
at the Seoul  
Tax Information  
System



## SEOUL, READY TO SHARE WITH THE WORLD!

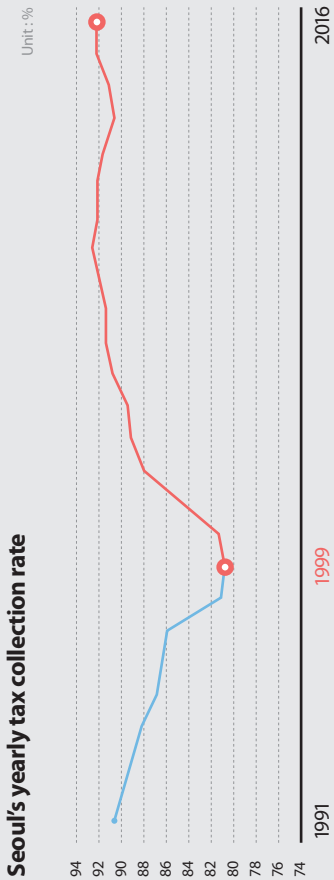
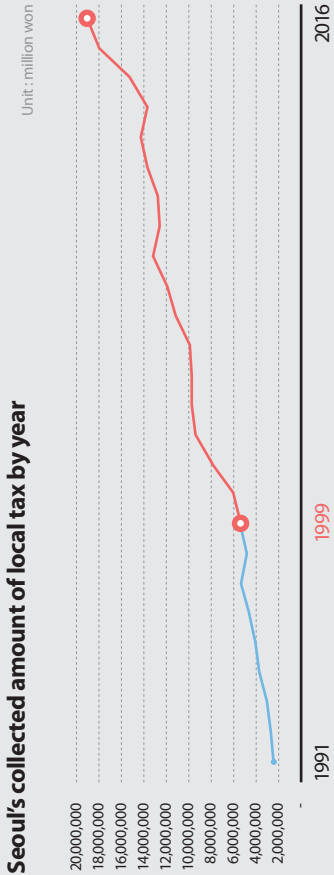
### Seoul's internal system

- Local administration information system
- Local finance information system
- Non-tax revenue information system
- Dasan Call Center
- GIS system
- Internet corporation tax system
- SMS system
- Personnel system
- Computer receipt center



### Interface for connecting information to related agencies

- Administrative information sharing system
- WETAX
- ETAX
- Tax Integrated System
- General car civil service information system
- Customs refund system
- Online public auction system
- Real Estate Transaction Management System
- Resident registration network
- Mail management system
- Minwon 24
- Supreme Court Computerized System for Registry Work
- e-document distribution center
- Immigration Office
- Integrated social welfare management system
- KRAS (Korea Real Estate Administration Intelligence System)

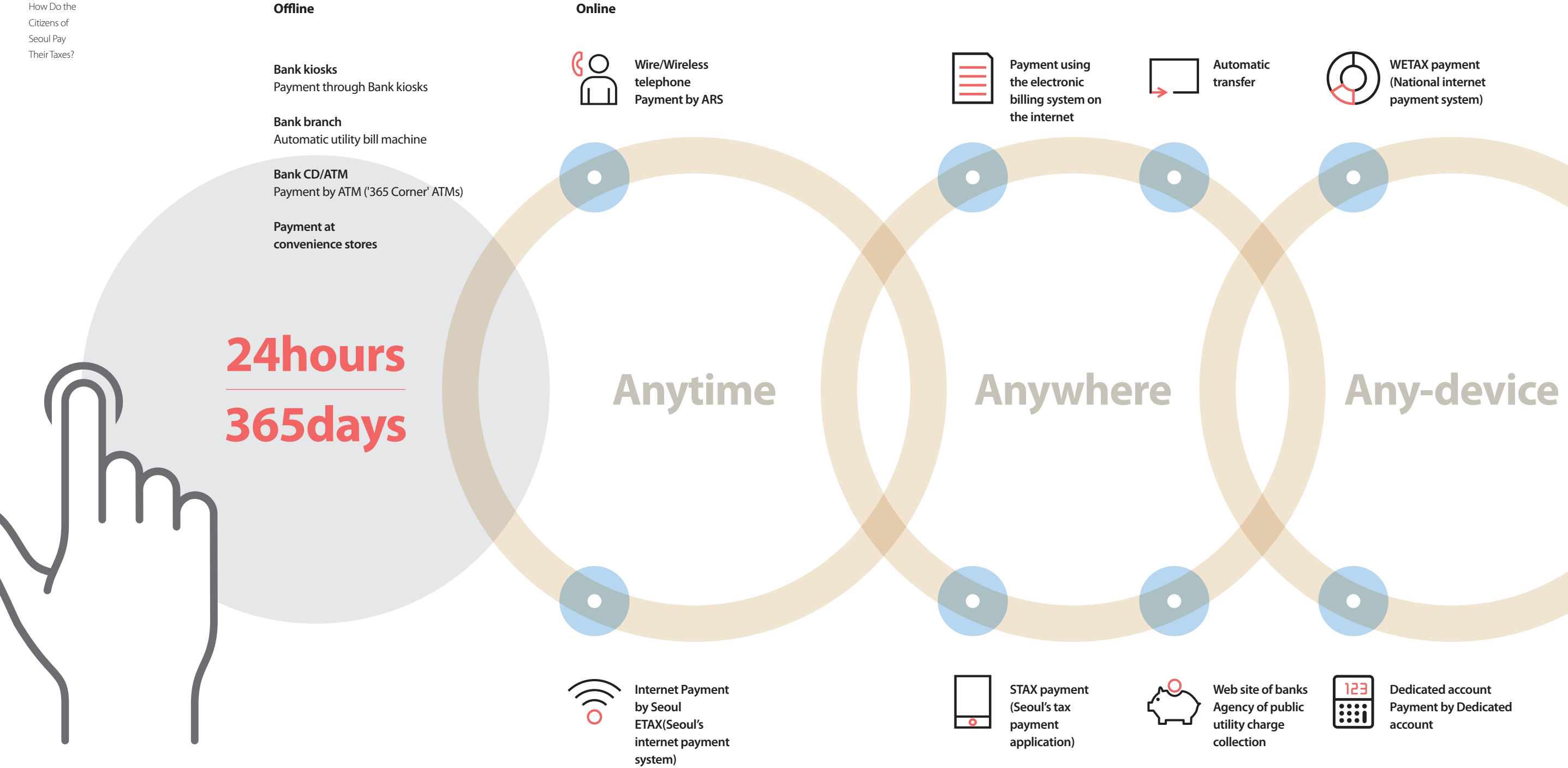


# How Do the Citizens of Seoul Pay Their Taxes?

24 hours  
365 days  
The receipt system is completed.

SEOUL, READY TO SHARE WITH THE WORLD!

How Do the  
Citizens of  
Seoul Pay  
Their Taxes?

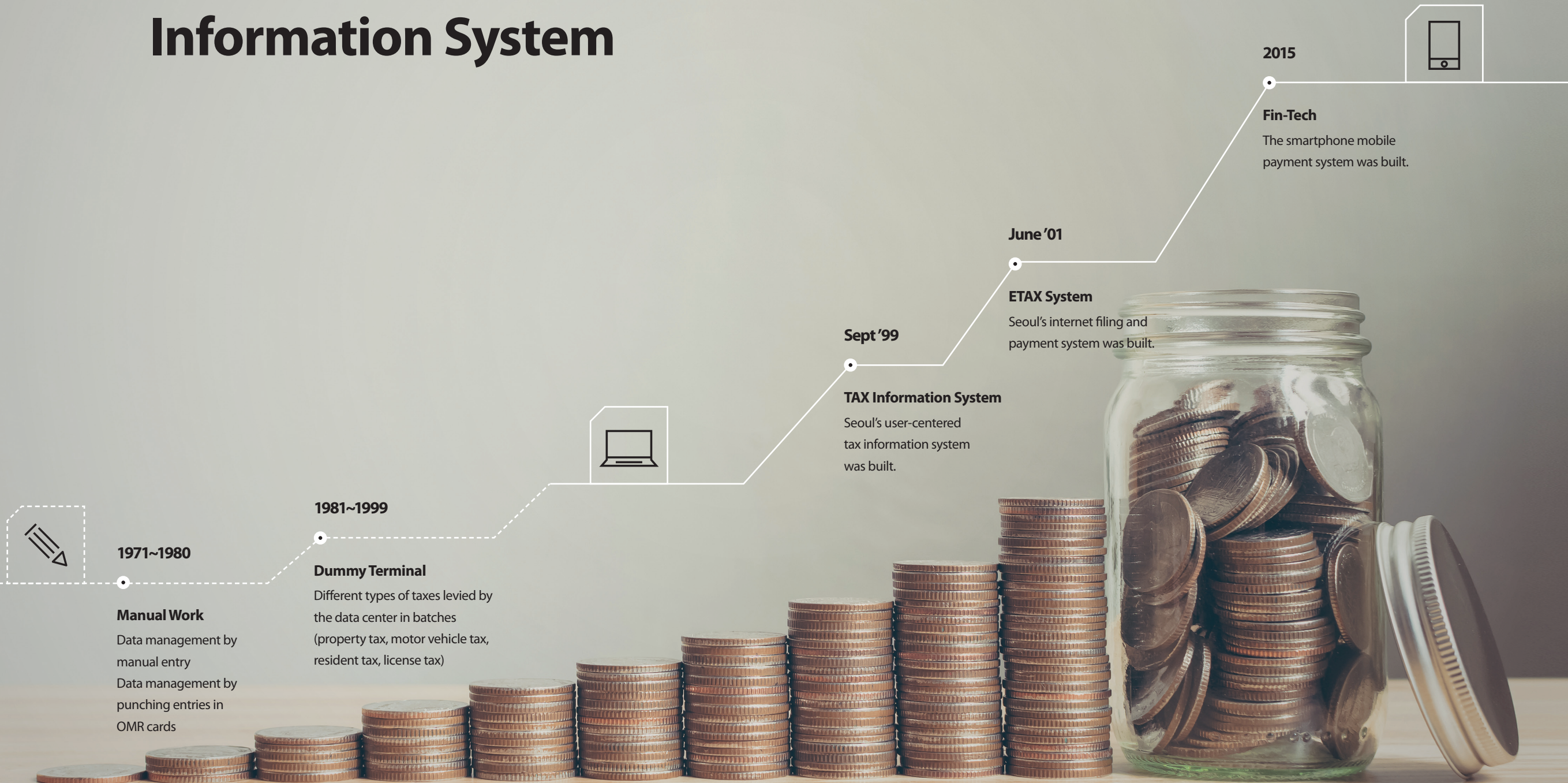




## 01 From Manual Entry to Fin-Tech

# History of Building the Seoul Tax Information System

Until the 1990s, taxpayers filed their tax returns at the kiosks, and Seoul imposed taxes in batches. Realizing the limitations of the manual work which was labor intensive, costly, and administratively inefficient, Seoul devoted a lot of effort to making improvements. As a result, the Tax Information System was built in September 1999, which through constant upgrades has become the advanced and stable system that it is now.





# Local tax computerization process



**1971~1981**

**Emerging stage**

- Computers were used for imposing local taxes (Property taxes) for the first time.



**1982~1991**

**Introduction stage**

- Nationwide joint taxation was computerized to process city/provincial tax data and to impose/ collect composite land tax.



**1992~1999**

**Driving stage**

- PC-based data management by autonomous district
- Imposing/receiving taxes by batch across the entire city of Seoul
- Output OCR bill.



**1999~2002**

**Development stage**

- Online data processing
- Integrated management of DB in the whole gu-offices.



**2003~**

**Advancement stage**

- System upgrades and introduction of user-friendly payment policies
- Enabled citizens to pay local taxes easily anytime, anywhere

1970s

1980s

1990s

2000s



# Structure and Functions of the Seoul Tax Information System

The Seoul Tax Information System has greatly benefited from the development of information and communication technology. The system that was first introduced in 1999 was able to grow more efficient and stable thanks to the prior work done in the 1980s and 1990s to computerize tax imposition data.

The main menu of the present tax information system is classified into general management, imposing management, receipt and refund management, and arrears management.

Each menu is composed to allow intuitive and efficient management to system managers and revenue officers.

General  
management

Levy  
management

Receipts /  
Refund of  
local taxes

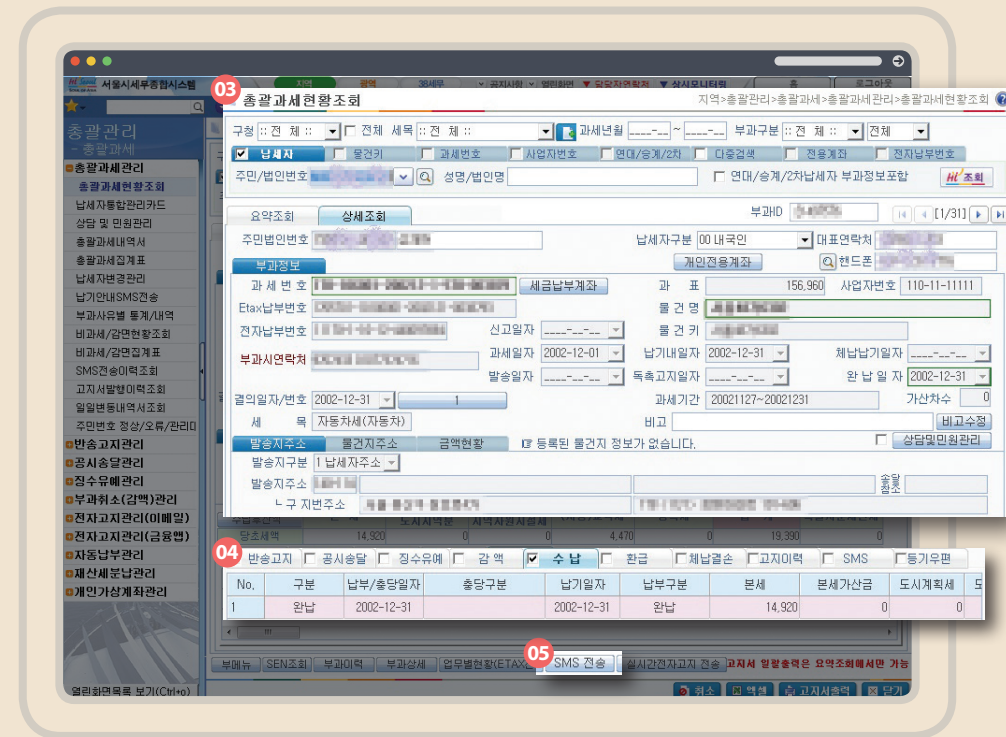
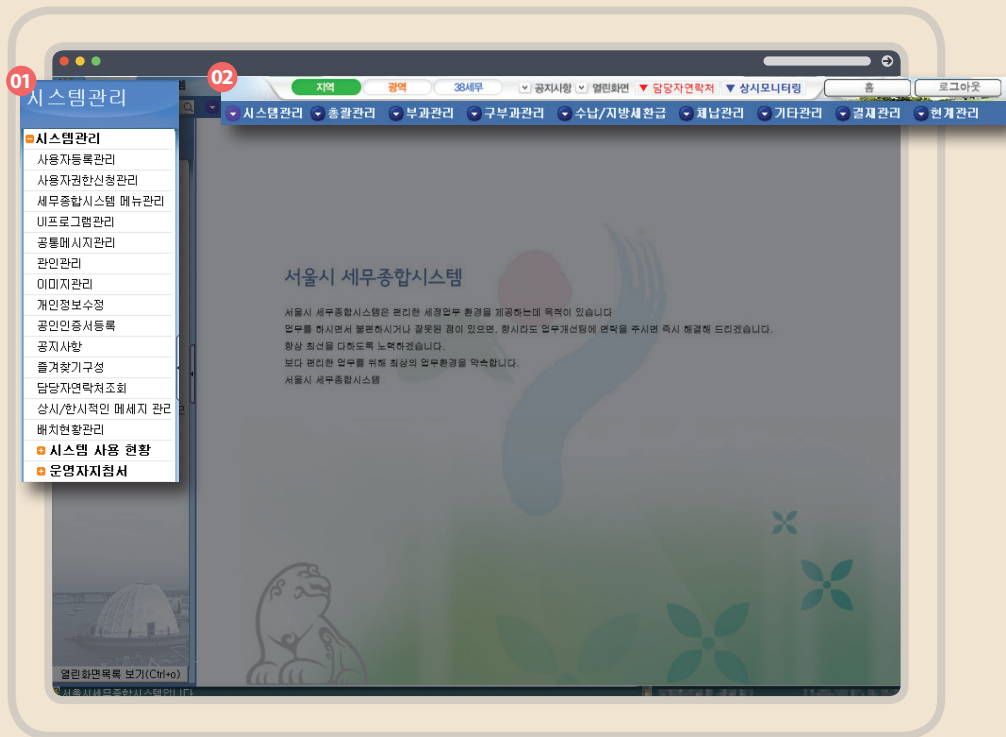
Arrears  
management



# General management

## 02

Structure and Functions of the Seoul Tax Information System



## The Seoul Tax Information System was built

The Seoul Tax Information System was built to enable processing of local tax levy, collection, arrears, demand letters, foreclosure, overpayment or erroneous payment, and certificates by connecting to over 40 other systems real-time. You can check the entire taxation history of taxpayers in the general management menu. You can provide citizen service quickly because you can see at a glance all the details related to taxpayers, including receipts, arrears, delivery of bills, etc. on a single screen.

General management

Levy management

Receipts / Refund of local taxes

Arrears management

01

By clicking on the menu on the left, you can view the drop-down menu corresponding to the active tab and select the screen you need to work on.

02

The upper menu comprises the important functions of the Tax Information System, and it also provides notices and bookmark functions for users' convenience.

03

Summary view of taxpayers' information allows convenient consultation via a single screen when responding to civil inquiries.

04

By clicking on different tabs you are able to check taxpayers' payment, arrears, and history of bill delivery, allowing more detailed response to civil inquiries.

05

By using the 'SMS send' menu, you may send the account number and summary information to the taxpayers' smartphone to help make the payment simple and easy.

# Levy management

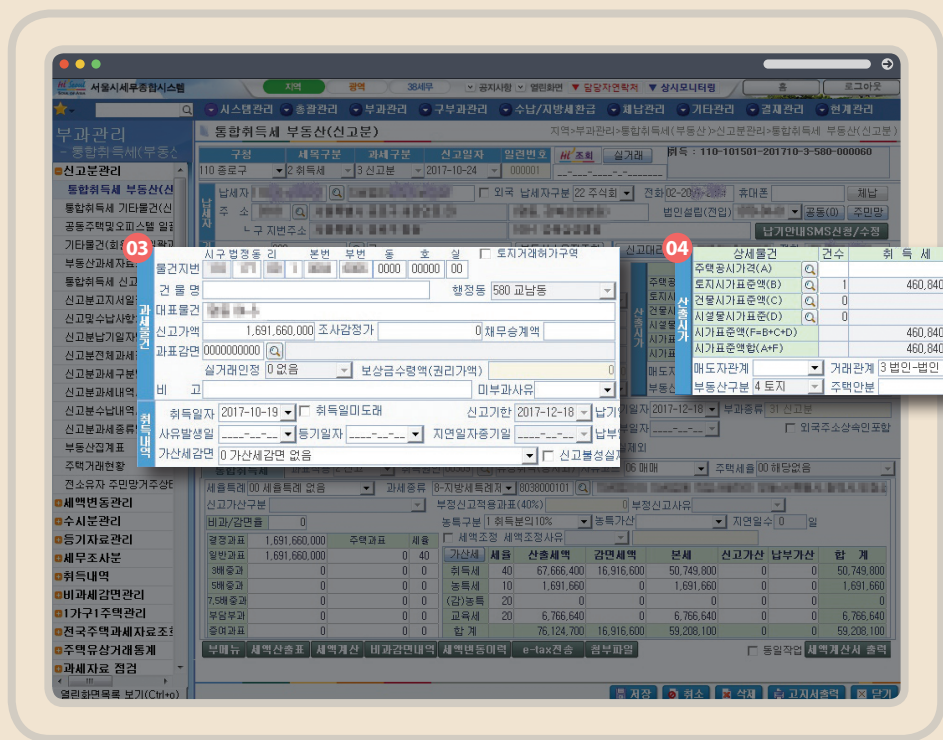
## 02

Structure and  
Functions of  
the Seoul Tax  
Information  
System

## Levy management allows for

Levy management allows for elaborate management of all 11 tax items levied by Seoul including acquisition tax and property tax. It is also convenient for the users because work is improved in line with the improvement in the local tax laws and institutions.

The taxation output from levy management may be received in various forms such as paper bills, automatic transfers, STAX (mobile app), e-mail, and mobile financial applications.



General  
management

Levy  
management

Receipts /  
Refund of  
local taxes

Arrears  
management

01

This is the property tax management screen that allows systematic management and imposition of property tax on all buildings, houses and lands in Seoul from a single screen.

02

Taxable real estate is systematically managed with the location information obtained by using GIS and documentation of relevant information gathered during field investigation by public officer in charge.

03

It includes acquisition information on real estate that has been newly built or transferred. Ownerships of real estate are verified through acquisition reports.

04

Users' convenience is maximized as they can register property easily and quickly based on the basic information on real estate already recorded without having to do additional work.



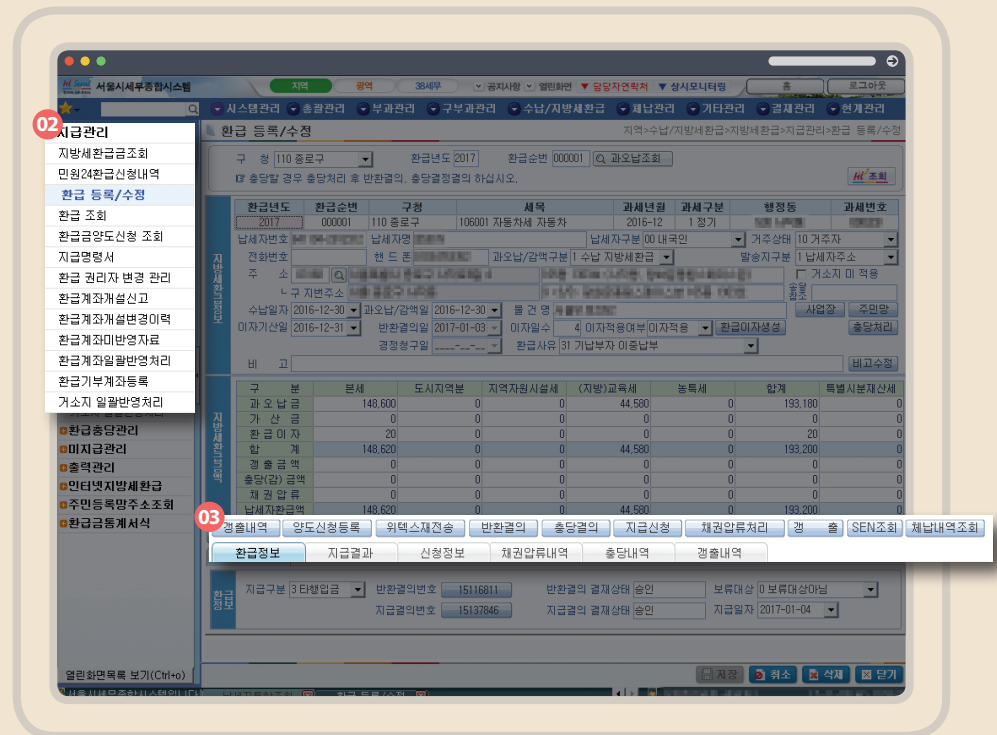
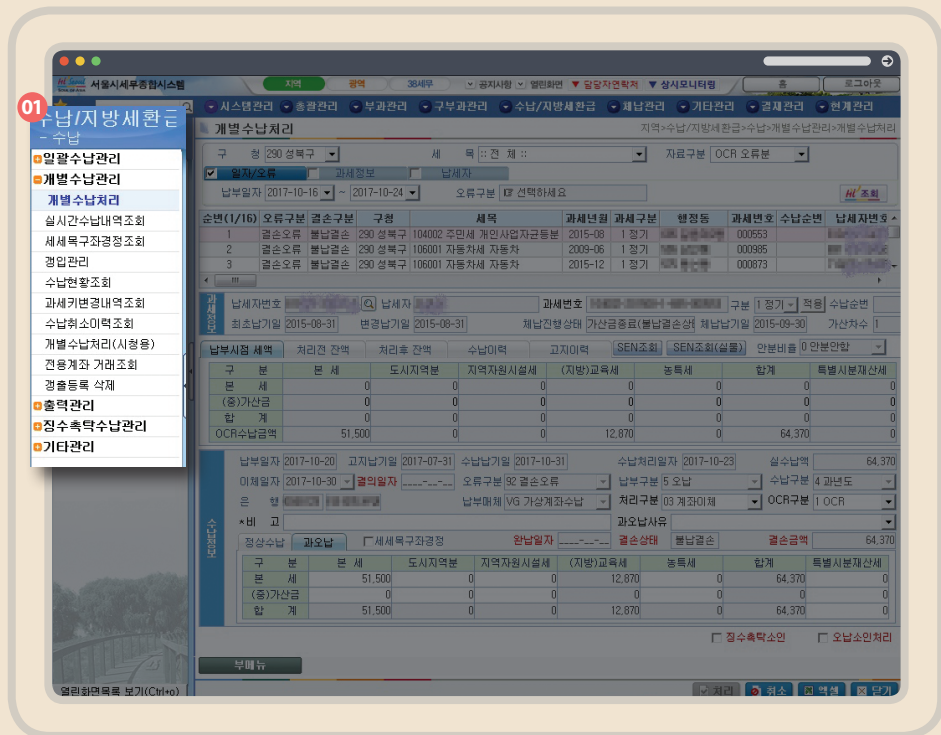
# Receipts / Refund of local taxes

Seoul makes  
sure that

Seoul makes sure that all the receipt data from taxpayers is collected in Woori Bank's computer receipt center, the city vault. This is sent to and processed by the Tax Information System every day. The data that was changed after payment is verified and processed by the person in charge at the autonomous district level. Notices are sent out in a batch regarding refunds due to correction of national tax, redundant payment by the taxpayer, etc. Taxpayers may resort to various means to claim the refund.

## 02

Structure and  
Functions of  
the Seoul Tax  
Information  
System



General  
management

Levy  
management

Receipts /  
Refund of  
local taxes

Arrears  
management

01

The present status of taxpayer payments can be checked immediately and in real time. Bulk receipts are automatically processed.

02

If a taxpayer paid too much local taxes or paid by error, s/he is refunded, and most of the refunds are made immediately.

03

Other arrears of taxpayers can be checked before refund, and the refund progress can be checked in order. Payment of the refund is postponed if there are arrears in other agencies including customs duty and national taxes.

# Arrears management

## 02

## Structure and Functions of the Seoul Tax Information System

**In arrears  
management,**

In arrears management, the benefits outweigh the cost, and management of all delinquent taxpayers regardless of the amount in arrears is important. Arrears management of the Seoul Tax Information System sends demand letters to the late payers, and it notifies the delinquent payers of the details of the debt collection procedure (warning, foreclosure, delivery of documents, etc.) and encourages compliance if they fail to pay during the extension period.

01

# **압류관리(설정/해제)**

지역>채납관리>압류>압류관리>압류관리(설정/해제)

구청코드	105 38세금징수와	납세자번호		납세자명		<input type="checkbox"/> 회생/파산여부
부서코드		압류년도		설정일	2017-07-02 ~ 2017-08-11	
차량번호		고객이관	전체	물건정보	선택하세요	<b>HI 조회</b>

요약조회 | **상세내역** | **[\* 고객이관자료는 압류해제나 정보수정을 진행할 수 없습니다.]** | 압류관리대장ID | 10 | [8/438] | **HI 조회**

+납세자번호 +납세자구분 +도로명주소 +구 지번주소	00 내국인 +사입자번호 +상세주소 지번상세	연속통속시 압력정보 유지여부 <input type="checkbox"/> 납세자정보 고정 <input type="checkbox"/> 압류정보 고정
	고객이관 자료 <input checked="" type="checkbox"/> 속박서 출력주소 <input type="checkbox"/> 지번 <input type="checkbox"/> 도로명 전좌번호	
	+부 서 1 1005 38세금징수 년도/순번 2017 004180	해제처리 <input type="checkbox"/> 문서번호 해제사유 해제비고 채권압류해제통지서발송일 금결제해제등록일
	압류진행 1 압류종 접수번호 등록번호 압류비고 추심보류 설정여부 <input type="checkbox"/> 추심보류사유	압류일자 2017-07-05 등기접수일 압류비고 추심보류 설정여부 <input type="checkbox"/> 추심보류사유

**이전정보**

물 건 명 25 집합건물 수 신 처 부동산고유번호 압류할 지번 특 이 사 항	물건정보 이해관계인 제3자등 사전보기 회생/파산조회 추심내역
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대법원 등기 상태 보정 압류상태 압류등록일자 말소상태 말소등록일자	압류금/누락가산금 1 17,768,020 0 0 0 압류금 1 17,768,020 2차 등금 0 0 0 2차 등금 0 0 0 0
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압류/말소신청 | 취하신청 | 보정신청 | \*대법원 등기신청은 업무시간(18시) 이내에 가능합니다.

General management

Levy  
managementReceipts /  
Refund of  
local taxes

## Arrears management

01

- To ensure fairness vis-à-vis compliant taxpayers, delinquent taxpayers are subject to measures such as foreclosure of property and deposit, etc. to induce debt payment.
- Foreclosed property is sold through auctions, and the proceeds are used to cover the debt owed.
- Administrative restrictions on habitual delinquent taxpayers such as disclosing their names are used to facilitate tax compliance. Such measures have a psychological effect on the taxpayers to reduce late payments and positively reinforce culture of compliance.

[illegible]

02

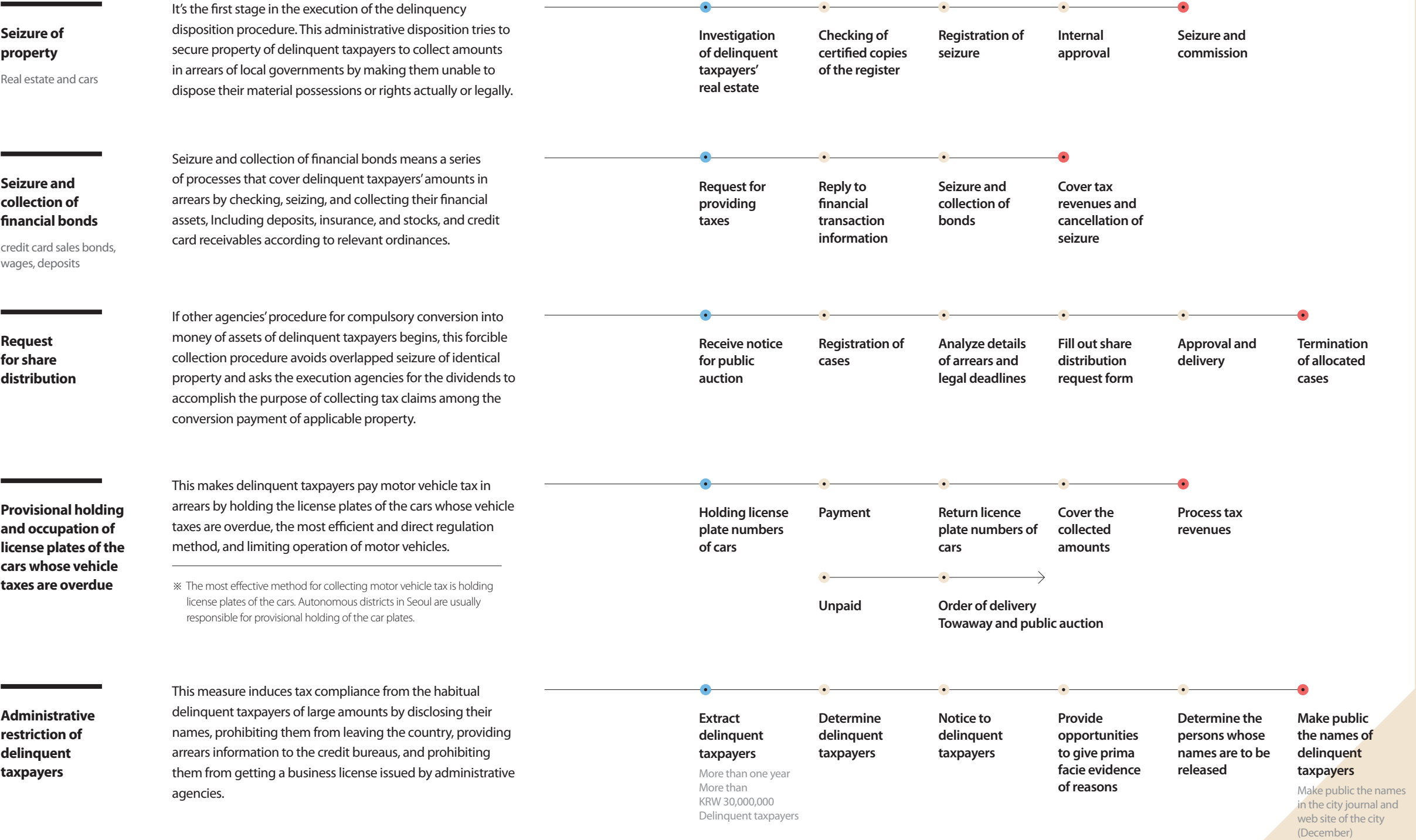
Overall status of the taxpayer may be viewed to check the amount in arrears and to record memos of the consultation to provide better response to civil inquiries.

03

Status of reductions and foreclosure can be easily viewed through a single screen by providing checkboxes for the arrears progress such as payment of monthly surcharges, etc.

# Arrears Collection Strategy

Seoul's technique to collect taxes in arrears of local taxes is largely classified into the 5 categories of seizure of property, seizure and collection of financial bonds, Request for share distribution, provisional holding and occupation of license plates of cars whose vehicle taxes are overdue, and administrative restriction of delinquent taxpayers.

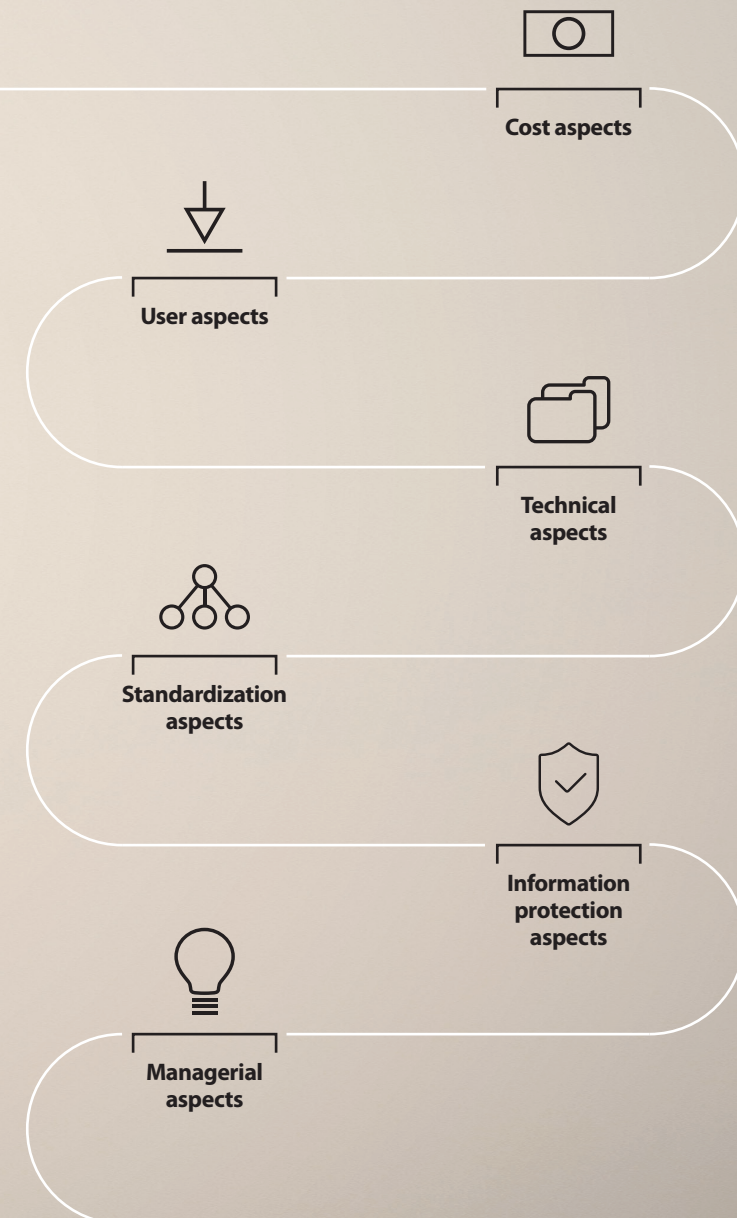




### 03 Build economically and manage effectively

# Features of the Seoul Tax Information System

Although the Seoul Tax Information System was designed as a large-scale system handling the tax administration of a megacity home to a 10 million population, its establishment, operation and maintenance is aimed at low cost and high efficiency. This enables provision of smooth and highly professional tax administration services as well as prompt and exact maintenance.





Cost aspects

Low costs for  
building and  
maintaining the  
system

- The Seoul Tax Information System maximizes reutilization and reuse of business components and improves development productivity by applying the framework specialized in the business of local taxes.
- Under the operation protocol, an internal team is set up responsible for the system maintenance so as to prevent unnecessary maintenance.

Expenses for the  
building of the system  
10.2billion

10.2



The number of  
operators  
24 people

24



It receives information on the current state of the service by using application performance monitoring tools and collecting database processing information on the real time service processing status.  
It checks if the service is stably implemented by tracing CPU usage, memory usage, and elapsed time when handling the service so that stable operation can be implemented for 365 days a year. And as the management system of the tax information system is operated, you can take prompt measures by notifying managers of abnormal operation.

User aspects

Higher  
convenience of  
users

- The system is set up in a way that it is improved in line with the legal and institutional improvement, providing convenient services to the users.
- Online workload and batch workload have been separated to minimize the system response time of the personnel responsible for online work and to allow for batch workload to be handled at all times.

Online speed of response  
Within 3 seconds

3



The Seoul Tax Information System maximizes development productivity by using the latest development tools and reduces response time by exchanging only the data that was changed and raising the network traffic efficiency via intelligent caching method. Seamless service is provided thanks to the separation of online and batch workloads.

## Technical aspects

### Stable and flexible system environment based on cutting-edge technology

- Periodic renewal, archiving, and management of large amounts of data allows for easy data processing, and the system is scalable capable of providing stable services.
- It secures flexibility by applying the latest technology that connects the system with the Ministry of the Interior and Safety and other agencies.
- Work productivity is improved and the service quality is upgraded through development based on the framework.

It can handle 4,000,000 cases without network slowdowns.

4mil



The continuous service is provided for 365 days.

365



The stable and flexible Seoul Tax Information System can be used without slowdowns when working online even when processing big data. The system can smoothly be operated in all the PCs because it is based on state-of-the-art technology. Above all, the flexible system is advantageous for responding to environmental changes. In particular, it can flexibly cope with the development of programs according to changes in the local tax laws. In addition, it increases reutilization of the service by supporting SOA(Service Oriented Architecture).

## Standardization aspects

### Excellent integration improves efficiency of tax business.

- It shares information on sources of taxation with more than 40 external agencies by securing interoperability of information systems.
- It builds the organic cooperation system with cities, counties, and districts all over the country and maximizes business efficiency by standardization of data and processes.

Standardization of the codes for data compatibility.

Code



Compatible with 226 cities, counties, and districts all over the country.

226



### Safely protected personal information

- Blocks information spill in advance by controlling access to the database (Access control/Rights/Control/SQL monitoring, Logging).
- It's a safe system environment because personal information in the database is encrypted.

### The system improves the business efficiency of tax officers.

- The system is majorly advanced and it is suitable for use in local tax-related business based on the defined procedures relating to local tax-related business.
- It has an environment that can receive opinions about general business, including the organization, human resources, and design of business processes, and for prompt decision-making.



## 04 Anytime, Anywhere, Any Device!

# Payment System of the Seoul Tax Information System

Seoul's payment system has been developed through proper consideration of the convenience of taxpayers.

It has built an environment in which taxpayers can pay taxes anytime and anywhere, 365 days a year by taking note of their various lifestyle trends and reflecting their needs and necessities.

Various receipt windows, including banks and convenience stores, have been opened to citizens who are familiar with the offline service. It has developed and operated various online channels and smartphone applications, including ETAX for the citizens who find the online service to be more convenient.

### Online Process Period(Real-time) 2001~2014

#### Requirements

- Connection of the receipt center and computer systems to banks/credit card companies is required.
- The citizens need to open bank accounts and have cards issued.
- Wire networks need to be built and sufficient electric energy is required.
- Various IT environments are required: ARS, Internet, CD/ATM machines, etc.

#### Advantages

- Payment in cash is unnecessary.
- Prompt totals of tax revenues are possible.
- Short payment time

#### Disadvantages

- Expenses for building large scale infrastructure are required.

### FinTech Period ~2015

#### Requirements

- The connection of PG companies to the receipt centers and computer systems is required.
- High computing power of the receipt centers is required.
- The citizens have mobile phones (Android, IOS) and join the simple payment service.
- The citizens need to open bank accounts and have cards issued.

#### Advantages

- Payment in cash is not required, Prompt totals of tax revenues are possible.
- Short payment time, Relatively low costs for investment in infrastructure (Installation of wire networks is not required)
- High possibility of development of businesses related to fin-tech

#### Disadvantages

- Commission according to the usage of PG (Payment gateway)

### Development Process of the Payment System

#### Batch Process Period ~2000

#### Requirements

- A large number of bank branches
- System for issuing bills in large quantity(OCR/QR barcode printing)
- Receipt center where batch processing is possible(Technology to recognize OCR/QR bar codes is required.)

#### Advantages

- Can pay taxes in cash.
- Infrastructure investment is minimal.
- Can use the cash in banks easily.
- Create jobs related to delivery of bills.

#### Disadvantages

- Mail delivery cost.
- Need to hire employee at the bank kiosk for receipt of tax payment.
- The distribution centers for collecting and transporting bills are required.
- Skilled human resources for batch processing are required.
- Time consuming to tally total amount of tax revenues (1 to 2 months)



04

Payment  
System of  
the Seoul Tax  
Information  
System

# Payment system Online/Offline

Offline

Content	Recognition·Payment Recipient·Time	Remarks (Features and advantages)	Next forwarding details
Payment through bank windows	- Payment in cash - During business hours of banks	- Visit banks/Non-face-to-face payment - Traditional payment method	
Bank branches Automatic utility bill machine	- Account transfer(Transfer to accounts held at the same bank and other banks) - During the business hours of banks.	- Visit banks / Face-to-face payment	- Change to online payment
Payment in convenience stores	- Account transfer(Woori Bank and Shinhan Bank's cash cards are possible.) - Payment by credit cards for 24 hours	- Possible to pay at Family Mart, GS 25, Seven Eleven, and By The Way convenience stores.	- Expansion of banks - Expansion of payment by credit cards
Payment by ATM ('365 Corner' ATMs)	- Account transfer (Applicable banks), Credit cards	- Payment is possible from 07:00 to 23:30, 365 days a year.	

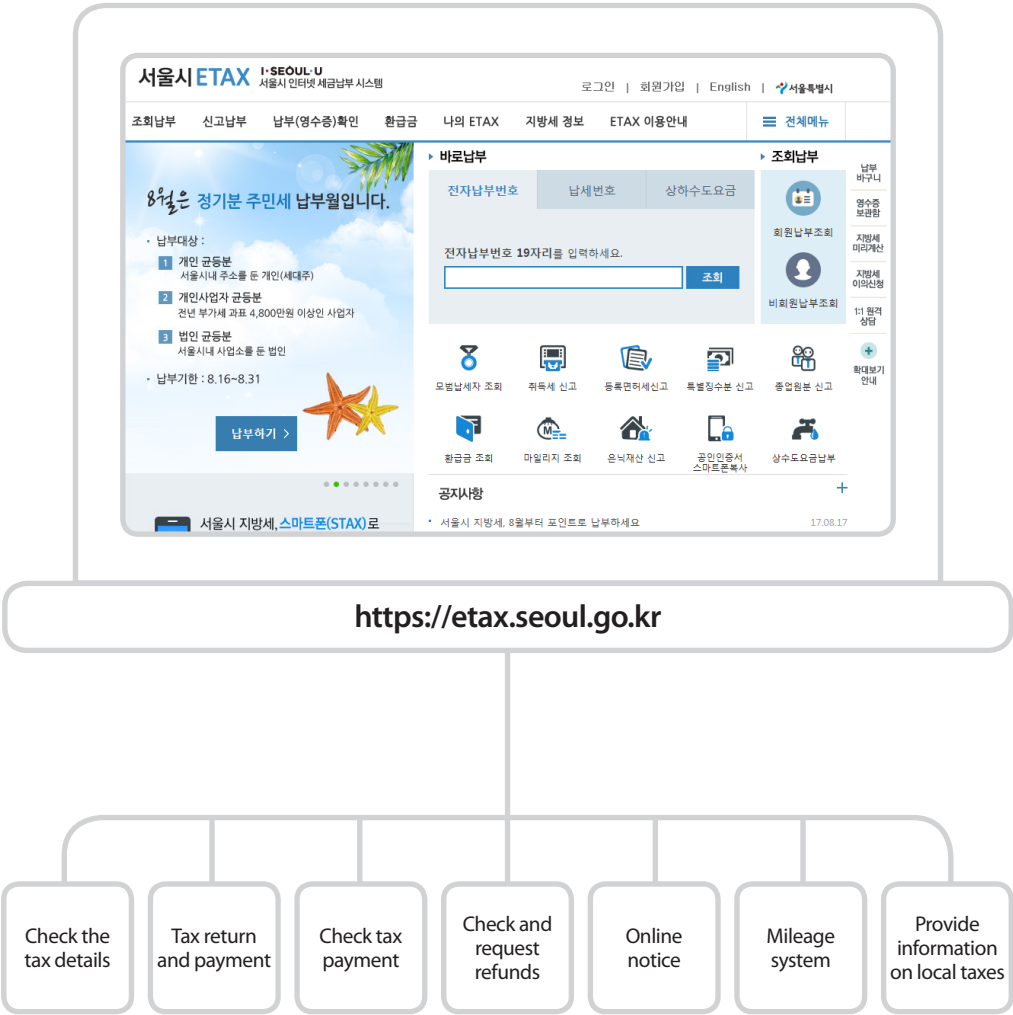
Online

Internet

Content	Recognition·Payment Recipient·Time	Remarks (Features and advantages)	Next forwarding details
Seoul ETAX payment	- Payment by credit cards and account transfer / Filing and payment - 24 hours (365 days)	- Basis of e-tax payment - Payment through the electronic billing system, except for Woori Bank - Payment of local taxes and nontax revenues in a lump - Put in force in June, 2001.	
Automatic transfer	- Account transfer (All banks) - Automatic payment by credit card	- Automatic payment by credit cards implemented since December 2016.	
Websites of banks Payment of dues and utility charges	- Account transfer of applicable banks - 07:00 to 23:30, 365 days a year	- Familiar media for internet banking users - Implemented since July, 2007	Extension to 24 hours
Payment through the electronic billing system on the internet	- Account transfer, Credit cards - 07:00 to 23:30, 365 days a year	- Implemented since 2004.	Extension to 24 hours
WETAX(National internet payment system)	- Account transfer, Credit cards - 07:00 to 23:30, 365 days a year	- Payment of national local taxes is possible. - Operated since the first half of 2009	

## ETAX, Seoul Internet Tax Payment System

ETAX, the representative online payment system of Seoul, can receive more than 500 types of taxes for 25 local governments, including local taxes, motor vehicle taxes, property taxes, water and sewage charges, and parking fines. It is a one-stop, internet-based service. The Seoul ETAX system is managing taxpayer-centered taxation information in an integrated manner. ETAX makes it possible to check a variety of information, including checking of tax details, arrears, and proof of tax payment. The website supports both Korean and English languages.





04

Payment  
System of  
the Seoul Tax  
Information  
System

Wire/Wireless telephones

Content	Recognition-Payment Recipient-Time	Remarks (Features and advantages)
Payment by ARS	- 13 credit cards, account transfer (Woori Bank) - 24 hours	- No certificates, make payments on the move - Implemented since 2006. - Tel. 1599-3900

Dedicated account(s)

Content	Recognition-Payment Recipient-Time	Remarks (Features and advantages)
Payment by Dedicated account(s)	- Account transfer (Transfer to identical and other banks is possible.) - 24 hours	- Payment by account transfer through any media - The easiest medium regardless of age - Dedicated account(s) banks: Woori Bank, Shinhan Bank, KEB Hana Bank, Kookmin Bank, IBK, Post Office bank, City bank, Nonghyup, Suhyup - Implemented since December 2008.

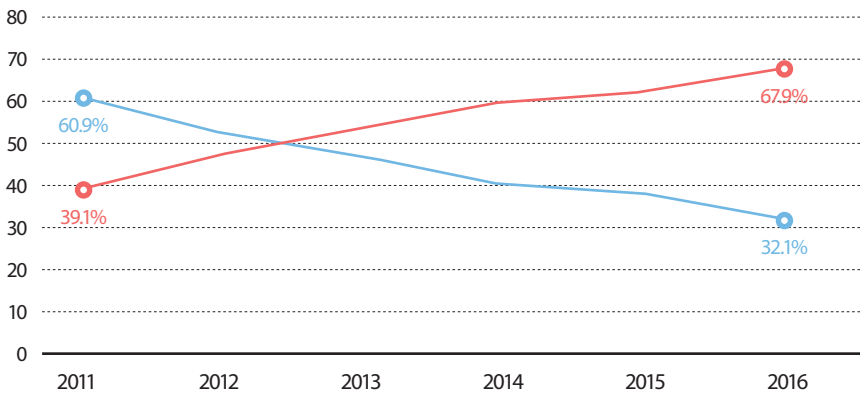
Smart phone

Content	Recognition-Payment Recipient-Time	Remarks (Features and advantages)	Next forwarding details
Smartphone Application for Tax Payment	- Account transfer (Woori bank) - 13 credit cards - Simple payment (Kakao, SSG, PAYCO, and App cards) - 24 hours	- Make payments on the move - Expansion of the service including applying for notifications and e-notice - The simple payment system has been implemented since September, 2015.	- Continuous upgrade to be compatible with the latest smartphones

Present condition of online and offline payment by year

**Online** ETAX, WETAX, ARS, web sites of banks, the electronic billing system on the internet, STAX, virtual accounts, etc.

**Offline** CD/ATM, banks' utility bill receipt machines, payment through bank windows (Non OCR, etc.), convenience stores, etc.

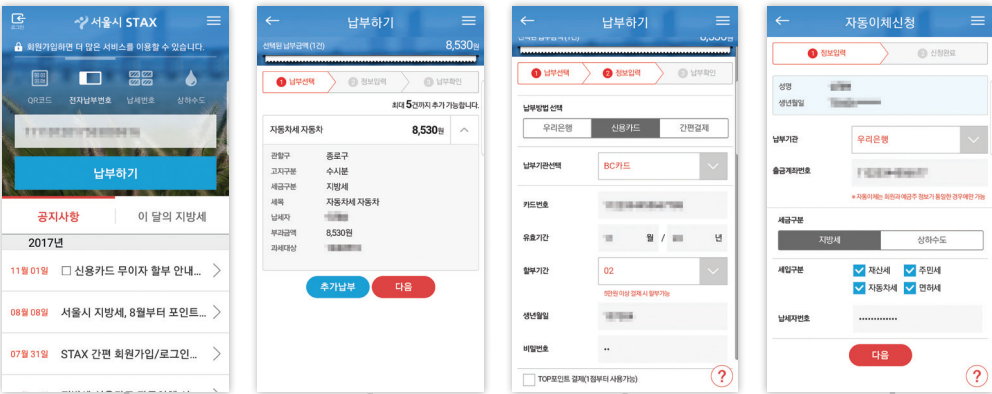


# STAX Seoul's Smartphone Application for Tax Payments

STAX is the smartphone app service which allows easy payment of local taxes, non-tax revenues, water and sewage charges through simple payment system, credit cards, or Woori Bank account transfer.

You do not have to visit banks or use PCs when using STAX and can easily pay taxes by 10 types of simple payment systems, 13 credit cards, and Woori Bank.

You can also use all kinds of services including inquiry of mileage, e-notice of refunds, request for automatic transfer, inquiries of exemplary taxpayers and arrears.



- Nonmember's payment**  
Numbers of bills or e-payment are required.
- Member's payment**  
Log in without any certificate.  
It's possible to pay taxes without bills.
- Very simple payment**  
Pay taxes after scanning QR codes of bills within the app.

# Future of the Seoul Tax Information System

SEOUL,  
READY TO  
SHARE  
WITH THE WORLD!

## Tax revenue aspects

Introduction of more intelligent analytical  
techniques and tools

1

Use big data analysis to identify  
tax base that had been omitted.

- Introduce various AI analytical techniques.
- Expand the connection of data for taxation to the National Tax Service, local governments, etc.
- Introduce analytical tools to respond to high tech tax evasion.

2

Make reasonable decisions  
based on data

- Provide real-time statistics for persons in charge and managers.
- Simulation for predicting tax revenues in real time

3

Local tax administration has  
developed through communication  
and cooperation

- Improve individual tax administration ability by sharing knowledge with one another.
- Share individual know-how with one another through communication.

## Technical aspects

Evolution of the system to keep pace with  
the Fourth Industrial Revolution

1

Improve satisfaction with tax  
administration by providing various  
customized services for taxpayers.

- Bills in life :**
- Receive bills through smart IOT instruments and pay taxes immediately after checking the bills.
  - Real time inquiries and response to the tax service for 24 hours through AI personal counseling secretaries.

2

Improve productivity of tax administration  
by providing systematic and efficient  
systems for tax officers.

- **No more simple, repetitive work :** Focus on productive business through automation of simple tasks
- Prevent omission of business by managing individual duties and business progress.
- Realize prompt administration by utilizing mobile devices.

